The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 781.—Vol. XX.] LONDON, SATURDAY, AUGUST 10, 1850. [Price 6d.

ASHBURTON UNITED TIN AND COPPER MINES.

MR. H. C. CREAGH has been instructed to SELL, BY PUBLIC AUCTION, at the COUNTING-HOUSE on the MINE, near ASHBURTON, SOUTH DEVON, on Thursday, the 22d inst., at noon, in one lot, without reserve, the valuable MINING LEASES, having about 20 years to run, and held at 1-20th dues, over those extensive setts, comprising valuable MACHINERY, in good order, with DRESSING FLOORS, CALCINING OVENS, and other usual OFFICES connected with large tin and copper mines.

The property may be viewed by application to Capt. Kernick, on the mines; and plans of the property, &c., obtained by application to George Carew, Esq., 22, Lincoln's Inn-fields; or Messrs. Caunter, Palk, Creagh, and Co., Ashburton, Devon; or Mr. William Murray, 2, Royal Exchange-buildings, London.

SHROPSHIRE.

MR. THOMAS EDWARDS has been honoured with instructions to SELL, BY AUCTION, at the Fox Inn, SHREWSBURY, about the end of September next, an important FREEHOLD ESTATE, in the parishes of CHIRBURY and HYSSINGTON, in the county of Salop, comprising about 600 acres, the property of the Rev. J. C. H. Stokes. Also, the MANORS of MIDDLETON and MUCKLEWICK, in the said parishes, in which are several valuable VEINS of LEAD ORE.

Further particulars will appear.

Lithographic plans and printed particulars are in preparation, and may be shortly had, with further information, on application to Messrs. Mickleburgh and Son, surveyors and land agents, Montgomery; Mr. Norton, solicitor, Shrewsbury; or to Mr. Edwards, the auctioneer.

BANWEN IRON COMPANY.—TO BE PEREMPTORILY SOLD, pursuant to an Order made in the matter of the Joint-Stock Companies' Winding-up Acts, 1848 and 1849, and of the Banwen Iron Company, with the approbation of Richard Torin Kindersley, Esq., the Master of the High Court of Chancery, charged with the winding-up of the said company, at the Mackworth Arms Inn, in the town of SWANSEA, in the county of Glamorgan, on Thursday, the 22d day of August, 1850, at Two o'clock in the afternoon, the MESSUAGES, FARMS, LANDS, TENEMENTS, and HEREDITAMENTS, called or known by the names of PANTYDDRAINEN, or BANWEN FARM, TIRBACH TONPURTHIN YNISMENIN and YNISDOMLID FARMS, containing 573 acres, or thereabouts, with the MINES and SEAMS of COAL, CULM, and IRONSTONE, and IRON MINE, MINERALS, FIRE CLAY, QUARRIES, ROCKS, and STONES, in, upon, or under, the said FARMS and PREMISES hitherto used by the BANWEN IRON COMPANY, and also the WORKS and PLANT of and belonging to the said Company.

The ESTATE is situate in the parish of CADOXTON juxta NEATH, in the county of GLAMORGAN, 13 miles from the town of Neath, and 16½ from the port of Swansea. The Swansea Canal is within 4 miles of the property, and a tramway connects it with the works. The South Wales and Vale of Neath Railways are within a short distance of the estate.

The PROPERTY is very rich in IRON ORE, and the LAND abounds with the finest ANTHRACITE COAL, which is worked by level.

The WORKS are capable of working and turning out weekly 90 tons of pig-iron.

Particulars and conditions of sale may be obtained gratis at the said Master's office, Southampton-buildings, Chancery-lane, London; of Mr. Adron, of No. 10, Coleman-street, in the city of London, the official manager of the said Company; of Messrs. Bristow and Tarrant, solicitors, 2, Bond-court, Walbrook, in the city of London, the Queen-wich, in the county of Kent; and at the Lamb and Flag Inn, Vale of Neath; and at the principal inns in Bristol, the towns of Swansea, Neath, Glamorgan, and Carmarthen.

The estate and works may be viewed any day between the hours of Ten in the morning and Five in the afternoon.—Dated 18th of July, 1850.

BRISTOW & TARRANT,
2, Bond-court, Walbrook, London, solicitors to
Henry Adron, the Official Manager.

EAST OF SCOTLAND MALLEABLE IRON COMPANY.—The Directors have been authorised to RECEIVE OFFERS for the PURCHASE, or LEASE, of the MALLEABLE IRON WORKS at DUNFERMLINE—comprising a STEAM-ENGINE, of 80-horse power, working the machinery, consisting of FORGE and 2 PUDDLE BAR TRAINS, of 16 inches diameter, HAMMER and PATENT SHINGLING MACHINE; also a 16-inch MERCHANT BAR or RAIL MILL, a 12-inch MILL, for ordinary sized merchant bars, and an 8-inch GUIDE MILL, 13 PUDDLING FURNACES, and 6 MILL FURNACES—the whole capable of producing 120 tons of bar-iron weekly.

A REFINERY STEAM-ENGINE, of 45-horse power, with blowing apparatus, complete, and two fires erected.

A complete SET of WORKSHOPS, containing a 20-horse power STEAM-ENGINE, driving a powerful roll-turning lathe, and blowing apparatus for smiths' fires.

A PUMPING and CLAY MILL STEAM-ENGINE, of 16-horse power, used for the manufacture of fire-brick, and pumping water for supply of engines.

Also, in course of erection, a STEAM-ENGINE, of 80-horse power, intended to drive the mills apart from the forges, having strong cast-iron framing laid down, and machinery suitable on the premises, which could be brought into active operation in a short period.

Together with the necessary TOOLS, LOOSE MACHINERY and STOCKS, of different kinds.

Offers will also be received for the PURCHASE of the ESTATE of TRANSY, consisting of about 107 imperial acres, with elegant MANSION-HOUSE and PLEASURE GROUNDS, situated about half a mile to the east of the town of Dunfermline.

Applications may be made to Mr. James Inglis, Chairman of the Company; or to Johnstone, Russell, and Craig, writers, Dunfermline.—Dunfermline, March 15, 1850.

CORNWALL.

TO MINING SPECULATORS AND CAPITALISTS.—TO BE SOLD, BY TENDER, NINETY-SIX (128ths) PARTS, or SHARES, of and in all that most promising mining adventure called OLD VIRGIN, situate near the sixth milestone on the turnpike-road from Truro to Mitchell, and on the eastern side of the said road, and adjoining on the west, to the Great East Wheal Rose Mine, the adventurers in which have gained, in a few years, more than £200,000, and 1-128th part whereof is now worth £900. The under stratum in Old Virgin Mine is of the like kind as that in Great East Wheal Rose Mine, and the several lodes discovered are all sprinked with silver-lead ore, and the sett is very extensive; the adit level has been driven about 14 fathoms deep—more than 400 fathoms—but no trial made under it, and five shafts have been sunk. A sett, for 21 years, will be granted by the landowner, who will accept for himself and friends 32 shares, and stipulates that no less part or share than 1-128th shall be held by any shareholder, or be recognised in any manner. There is a large and constant stream of water on the premises, and applicable to the purposes of the mine.

Captain John Champion, of Great East Wheal Rose Mine, near Truro, will show the ground; and further particulars may be had by application (post-paid) to Mr. Simmons, solicitor, Princes-street, Truro, by whom tenders will be received.

Truro, July 23, 1850.

PLUMBAGO AND LEAD MINES TO BE LET, IN ARGYLLSHIRE.

1. The PLUMBAGO on the ESTATE of KILLIEMORE, in the ISLAND of MULL, lately discovered.

It is seen in masses of various dimensions, some of which are equal to the best Borrowdale. The stratum of rock in which it appears is of large extent, and the few trials that have been made by blasting under the recommendation of Mr. Rose, mining surveyor, discovered many pieces at each blast, one of which weighed 70 lbs. The facilities of working are most favourable, the mine being upon the shore of Loch Scriden, a navigable arm of the sea, and labour is very cheap.

2. The LEAD MINES on the ESTATE of LAUDLE, in MORVEN.

These mines were many years ago worked to some extent, yet very imperfectly—no efficient works having been put down. They have lately been examined by Mr. Rose, who reports the veins to be very strong; and to show great capabilities even from surface exposure, and from their position to be very easily worked in respect of drainage. They are situated a few miles from Loch Sunart, a navigable arm of the sea, and within half a mile of which there is an appearance of ore not yet proved. They are within 10 miles of the Strontian Mines, with which a company might work them in conjunction.

BOTH ESTATES in which these MINERALS appear are FOR SALE.

For further particulars apply to Mr. C. M. Barstow, accountant, Edinburgh, trustee; or to Mr. Rose, mining surveyor, Drummond-street,—with both of whom specimens of the plumbago and of the lead ore may be seen, as also Mr. Rose's report.

Edinburgh, August 2, 1850.

LOCOMOTIVE ENGINES—ON SALE.—SIX NEW LOCOMOTIVE PASSENGER ENGINES and TENDERS; particulars as follows: Outside cylinders 15 in. diameter, and 22 in. in stroke; driving wheels 6 feet diameter; leading and trailing wheels 3 feet 6 inches diameter. All the wheels entirely of wrought-iron. Strong copper fire-boxes, with 68 feet of heating surface, and 120 tubes, 10 feet 5 inches long, and 2 inches outside diameter. The tenders are made to hold 1000 gallons of water, with well constructed framing, all of wrought iron, and are carried on six wheels, 3 feet 6 inches diameter, of wrought-iron, with cast-iron centres.

The whole of the workmanship is of the very best description, and the price very moderate.—For further particulars apply to the makers, Messrs. Benjamin Hick and Son, Soho Iron-Works, Bolton; or to Mr. Josiah Kearsley, at the office of Messrs. B. H. and Son, 1, New Broad-street, City, London.—July 25, 1850.

INDISPUTABLE LIFE ASSURANCE POLICIES.—COPIES of the REPORT of the PROCEDURE at the last ANNUAL GENERAL MEETING of the members, may now BE HAD by application at the OFFICES of the Company.

London Indisputable Life Policy Company, 72, Lombard-street, June 28, 1850.

MINING ALMANACK for 1850.—The SECOND VOLUME of this publication is now ready, with Original Articles and Statistical Matter up to the latest period.

London: Published at the Office of the *Mining Journal*, 26, Fleet street.

MR. JAMES CROFTS, of No. 4, KING-STREET, CHEAPSIDE, is encouraged to renew his recommendations to CAPITALISTS to turn their attention from Railways to MINES, as affording, after careful investigation of the merits of any undertaking presented to their notice, a SAFE MEDIUM for SPECULATIVE INVESTMENT.

Mr. CROFTS can procure SHARES in all the MINES of repute in the Tavistock District, and has FOR SALE specially—Wheal Langford, Wheal Trescoll, West Providence, Wellington, Esgair Llee, Cwm Erfin, Llwynmalees, and in all the dividend mines; also Lamherooe Wheal Maria (10 shares), Wheal Benny, Wheal Vincent, and Wheal Sarah; the latter mine deserves particular attention at this moment, as the shares can be had, by an early application, very much under their real value.

☞ Mr. CROFTS is NOT A DEALER in SHARES for his own account, but acts exclusively for principals, and solicits communications from the country.—Dated August 3, 1850.

MESSRS. CREFT, FULLER, & CO., 1, Royal Exchange-Buildings, have a FEW SHARES in SOUTH CARN BREA FOR SALE.—This sett is in decidedly the best metalliferous district in Cornwall, being situate between Carn Brea, £15 paid, and worth £130; Wheal Basset, £10½ paid, and worth £300; North Basset and Wheal Buller (opened about 18 months since), £10 paid, and worth £650. The cost-book and general superintendence will be under the same able management as Carn Brea, which has divided about £1200 per cent. upon the sums invested, and the sales of ore during the past quarter have realised upwards of £14,000.—(See *Mining Journal* of July 6).

Messrs. C., F., & Co. can also TRANSACT BUSINESS in the following MINES:—

Great Devon Consols	Condurrow
South Basset	Trethellan
Wheal Franco	Wheal Fortescue
Penzance Consols	Wheal Venton
West Wheal Friendship	Exmoor Wheal Eliza
Lewis	Warleggan Consols
South Plain Wood	Moditonham
Tincroft	

United Mexican—National Brazilian, &c.

UNITED MINES, TAVISTOCK (including the TAVISTOCK AND WHEAL ANDERTON SETTS).

In 1024 shares, at £10 each.—Dues One-fifteenth.

CONDUCTED ON THE COST-BOOK SYSTEM.

These mines are situate about one mile to the south of Tavistock, in the killas between the granite ranges of Heigaston and Dartmoor, having on the north Wheal Friendship, which has returned a profit of upwards of 600,000*l.*, and continues to pay large dividends; on the north-west, the Devon Great Consols (formerly Wheal Maria); and on the south, Wheal Franco; and one of these lodes, now being worked on, is the main east and west lode, on which Gunnis Lake, Liscombe, Crebor, and Crowndale were wrought, and which have returned profits exceeding 1,000,000*l.*

Four east and west, and two north and south (lead) lodes traverse this sett.

The machinery on the mine consists of a 30-inch cylinder steam-engine, with 90 fms. of excellent pumps; a 22-inch cylinder drawing engine, with 24 heads of stamps attached; two water-wheels, and all necessary buildings.

The peculiar advantages offered by this undertaking arise from the very great saving of money and time consequent on the purchase of the Wheal Anderton Mine and materials, by which the Wheal Ash lodes in the Tavistock Consols sett may be cut at about 100 fms. from surface; this is expected to be effected within three months from the present time, and the work done in the Tavistock Consols is available to this company.

Upwards of [illegible] of these shares are taken by persons resident in the district.

Further particulars may be obtained, and plans of the mine seen, at the offices of the company, 28, Threadneedle-street, London; or of Mr. J. Elliot Square, the purser, Plymouth.

IMPORTANT DISCOVERY OF SILVER LEAD MINES, near BRISTOL.—The attention of persons interested in MINING PROPERTY is particularly directed to these valuable SILVER-LEAD MINES recently discovered and proved at considerable expense. It is proposed to FORM a COMPANY to WORK these MINES, to be called the ITCHINGTON HILL SILVER-LEAD MINING COMPANY, to be conducted on the Cost-book Principle, which, by Act of Parliament, exempts shareholders from any liability beyond the amount subscribed on their shares.

The sett, or grant, comprises about 80 acres, and is held direct from the Lord of the Manor, at 1-20th dues, or 5 per cent. on the produce, for a period of 21 years, from June, 1850. The situation is highly advantageous, being only 10 miles from Bristol, four from the Wickwar Station, on the Birmingham and Bristol Railway, and within 6 of the River Severn. Several very valuable lodes have been discovered, three of which have been explored to some extent, showing throughout indications of a highly metalliferous quality, which the reports will fully explain, and samples seen at the Company's offices.

From the peculiar situation of the lodes, and the natural character of the district, it is considered that expensive machinery will be unnecessary.

A considerable sum of money has been expended on the only required *speculative* outlay, the lead being actually discovered. Gossan, fluor-spar, sulphuret of barytes, and other indications of there being a largely productive mine, have been found, fully justifying the shareholders in anticipating a return on the capital invested, equal to the most valuable mine now working.

The mine is to be divided into 3072 shares; 2272 of these will be issued to the public, on which £3 per share is to be paid on signing the Cost-book; this sum the proprietors are fully assured will carry on the works effectually.

Various assays have been made, and the ore is found to be exceedingly rich in silver; one by Mr. Clements, of the Panther Lead-Works, Bristol, produced 55½ per cent. of lead, and 71 ozs. 1 dwt. of silver to the ton of ore, and valued by him at £19 10s. per ton, as produced at the mouth of the mine; another by Mr. Johnson, of 79, Hatton-garden, London, produced 12 cwts. of lead and 68 ozs. of silver to the ton. The price of lead ore usually averages about £11 per ton.

Applications for shares to be made to Mr. S. J. Green, at the offices of the Company, No. 9, Hart-street, Bloomsbury-square, London, where specimens of the ore may be seen; and to Mr. Wray, Alveston, near Bristol, with whom the cost-book will lie for signature, for the convenience of country shareholders.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

BRISTOL AND EXETER RAILWAY.—Notice is hereby given, that, in pursuance of the Act of Incorporation, the next HALF-YEARLY GENERAL MEETING of the proprietors of this Company will be HELD on Wednesday, the 28th of August, at the White Lion Hotel, in the city of Bristol, at Eleven for Twelve o'clock.—The chair will be taken at Twelve o'clock precisely.

At the said General Meeting will be taken into consideration the Report of the Committee of Inquiry, appointed on the 6th day of March last, and the answer of the Directors thereto.

The transfer books will be closed on Saturday, the 17th August, and not be re-opened until after the said General Meeting, on the 28th.

Proprietors in arrear are not entitled to vote, nor are proxies available unless lodged with the Secretary five days at the least before the meeting.

The dividend for the half-year ending on the 30th of June last, will be payable to those proprietors who stand registered when the transfer books are closed, on the said 17th of August.

JAMES W. BULLER, Chairman.
J. B. BADHAM, Secretary.

Bristol Terminus, August 7, 1850,

TO RAILWAY DIRECTORS AND ENGINEERS.—Mr. THOMAS DUNN, of WIDSOR BRIDGE IRON-WORKS, near MANCHESTER, begs to give Notice, that he is now prepared to SUPPLY, to any extent, his PATENT IMPROVED WROUGHT-IRON and SPRING STEEL TRAVERSERS, for REMOVING CARRIAGES, &c., from one line of RAILS to another.

One of these Traversers can be put down in a few hours, without altering the permanent way, or stopping or impeding the general traffic. The cost of these Traversers, with wear and tear, is seldom one-third of that of the old system.

N.B.—There having been several attempts to infringe and evade this patent, by unprincipled tradesmen like people, the Patentee hopes to have the support of railway proprietors generally, as he has expended much time and money in economising and perfecting this portion of railway rolling stock.

TO BE SOLD CHEAP, TWO SECOND-HAND LOCOMOTIVE ENGINES, 6 wheels, coupled, as good as new, for contracting purposes.—For price and further particulars apply at the works.

TOUGHENED CAST-IRON—STIRLING'S PATENT.

No. 1—For SMALL and MEDIUM CASTINGS.
No. 3—For HEAVY CASTINGS.
No. 3 (*Extra*)—For ROLLS, HEAVY SHAFTS, and VERY HEAVY CASTINGS.

The above is by far the strongest Cast-Iron made, and is now being extensively used where strong castings are required.

Further particulars may be obtained on application to

Messrs. GARDEN & MACANDREW,
34, Dowgate-hill, from whom also the IRON can be PROCURED.

SECRETARY, AGENT, OR REPRESENTATIVE.—A GENTLEMAN, somewhat advanced in years, but still possessing considerable activity and energy of character, and of temperate habits, who has had considerable experience in business and commercial affairs, as a City Sworn Broker, begs now to offer his SERVICES, in EITHER of the ABOVE CAPACITIES, to a Public Company, already formed, or about being so, or private individual, or concern of respectability and influence. The Advertiser can give references of the most unquestionable character to merchants and others, by whom he has been long known.

Letters to be addressed to "J. K.," Merchants' Room, Lloyd's.

WANTED, a SITUATION, as SUB-MANAGER (in the capacity of Accountant) to a MINING COMPANY, by a Gentleman who has had 10 years' experience in connection with a large Coal Mining Company in the north of England. Testimonials from the company, and the usual guarantees will be given.—Address "C. J. T.," office of the *Mining Journal*, 26, Fleet-street, London.

IRON TRADE.—The Advertiser has been for the last 9 years at the head of a business in the Iron Trade, in London; the proprietors are unavoidably compelled to dissolve the firm, for reasons which will be explained; the business will be given up immediately, and the lease, with fixtures, must soon be sold to the best bidder. The Advertiser has not sufficient means to take up the concern on his own account, he, therefore, wishes to meet with a PARTNER, of business habits, who can command at once not less than £2000, for carrying on the business, which hitherto has been principally devoted to one of the most profitable branches of the iron trade. The concern has been established about 20 years, and has an excellent connection, both in the home and foreign markets. A Gentleman already acquainted with the Iron Trade, and who would take some active part in the management, will be preferred. The most respectable references will be given and required.—Address (by letter) "A. M.," at the office of the *Mining Journal*, 26, Fleet-street, London.

STEAM-ENGINE FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, a 32-inch cylinder STAMPING ENGINE, single acting, 9 feet stroke in cylinder, with steam case, boiler, about 11 tons, and axles and frames for 72 heads.—Applications to be made to Hocking and Loam, engineers, Redruth.

Dated June 26, 1850.

NICKEL ORE—SALE BY TENDER.—A QUANTITY of about 83 cwts. NICKEL ORE, lying at the Imperial Silver Mines, at JOACHIMSTHAL, in BOHEMIA, and containing about 40·6 to 42·2 per cent. Nickel, and about 1·8 to 4·5 per cent. Cobalt, is TO BE SOLD to the highest bidder. Parties desirous of tendering for the same are required to send in their tenders to the office of the Imperial Ministry for Agriculture and Mines, at Vienna, any time before noon, on the 16th of September, 1850.—Full particulars of the conditions under which the sale of the ore will take place, may be obtained of Messrs. AUGUST FABER & CO., merchants, No. 60, Mark-lane, London.

TO MINING COMPANIES AND OTHERS.—Mr. FENTON, ACCOUNTANT, being appointed SECRETARY to two or three MINES, is open to TREAT for OTHERS of established REPUTATION; the BUSINESS to be CONDUCTED at his OFFICES, No. 5, WHITE HART-COURT, LOMBARD-STREET, where applications may be made between Eleven and Three o'clock.

MINING PROPERTY.—BUSINESS transacted in every description of MINING PROPERTY, SHARES BOUGHT and SOLD, ADVICE GIVEN to PARTIES as to INVESTMENT, ADVANCES of MONEY MADE on this DESCRIPTION of PROPERTY, Statistics given on Mines, and the earliest information obtained from the mineral districts.—Apply to DURRANT & CO., Mining Sharebrokers, 58, Lombard-street.

MR. R. TRIPP, MINE AGENT (exclusively for principals), is instructed to BUY and SELL in most of the best DIVIDEND-PAYING MINES; also in NEW ONES, having present and prospective advantages—including Devon Great Consols, Condurrow, Comfort, South Caradon, West Wheal Treasury, Alfred, Penzance, Pendarves, Carthew Consols, Hennock Silver-Lead, Wheal Langmaid, Wheal Tremayne, West Wheal Virgin, Balnoon Consols, Wheal Penhale, East Trescoll, Tincroft, Tolcarne, Gustavus, &c.—Linnares, Santiago, St. John del Rey, &c.

MINING AND SHARE OFFICES,
ST. MICHAEL'S CHAMBERS, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

MINING PROPERTY.—Mr. HERRON has SHARES in the best DIVIDEND MINES FOR SALE, and which will give to the purchaser 17 to 25 per cent. for the outlay; amongst others are the following:—Tincroft, South Frances, South Basset, Condurrow, Stray Park, Wheal Seton, South Tolgus, Carn Brea, Treviskey, Tresavean, Trethellan, Wheal Comfort, Wheal Henry, Treleigh, Great Devon Consols, West Caradon, Wheal Mary Ann, Trelawny—St. John del Rey, Santiago, Alton, Copiapo, and United Mexican Mines.

MINING OFFICES—33, CLEMENT'S-LANE, LOMBARD-STREET.

MESSRS. BOXALL & CO., MINING SHARE DEALERS,
5, *CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.*

MESSRS. WATSON & ENSOR, MINING AGENTS,
4, *TOKENHOUSE-YARD, LOTHBURY, LONDON.*

MR. T. A. READWIN, MINING OFFICES,
2, *WINCHESTER-BUILDINGS, OLD BROAD-STREET, LONDON.*

JAMES LANE, MINING SHARE DEALER,
80, *OLD BROAD-STREET, LONDON.*

BRITISH AND FOREIGN MINES, RAILWAY SHARES, DEBENTURES, CONSOLS, FOREIGN STOCKS, AMERICAN, and other PUBLIC SECURITIES, DEALT IN at the CURRENT RATES of the day, for money or time. LOANS CONTRACTED, and MONEY AGENCIES undertaken upon liberal terms.

JAMES S. TRIPP & CO.,
LOMBARD-STREET CHAMBERS, CLEMENT'S-LANE, LOMBARD-STREET.

COPIAPO MINING OFFICE, 22, Austinfriars, July 22, 1850.—Notice is hereby given, that the HALF-YEARLY MEETING of the shareholders in this Company will be HELD at their offices, 22, Austinfriars, on Wednesday, the 14th August next, at One o'clock precisely.—At this meeting one director and one auditor will go out of office by rotation, but, being eligible, will offer themselves for re-election.

By order of the Directors,
ROBERT CLARK.

ASSAYING AND ANALYSIS.—ASSAYS and ANALYSES of MINERALS, METALS, SOILS, FURNACE, and all other MANUFACTURING PRODUCTS. INVENTORS and INTENDING PATENTEES assisted in PERFECTING any INVENTION involving an intimate knowledge of chemistry.

INSTRUCTION in all branches of ASSAYING, ANALYSIS, and METALLURGICAL and MANUFACTURING CHEMISTRY.

Communications to be addressed to Mr. Mitchell, 23, Hawley-road, Kentish Town.

Just published, price 1s.,

A LETTER ON THE COAL TRADE OF LANCASHIRE and DURHAM, showing the Extent of each Coal-field, the Quality and Price of its Produce, and the Comparative Cost of Transport from the Mine to the Ship; together with a Comparison of the Eastern Coal Ports and Liverpool, as shipping places for coal.

By WILLIAM LAIRD.

London: W. H. Smith and Son, Strand.—Liverpool: Baines and Herbert; all booksellers, and at the Railway Stations

IMPROVED WIRE ROPE.—The UNDERSIGNED, in tendering their best thanks for the liberal support they have hitherto received, respectfully solicit attention to the vast IMPROVEMENTS which new machinery and attention has enabled them to effect in the MANUFACTURE of ANDREW SMITH'S PATENT WIRE ROPE, more particularly his FLAT ROPE, which they can now produce of a description far superior to any previously offered to the public.

WILKINS & WEATHERLY.

Patent Wire Rope Works, 39, High-street, Wapping, London.

INDURATED AND IMPERVIOUS STONE, CHALK, &c.—AGENTS, with capital, are WANTED in all TOWNS to SUPPLY (under British and Foreign Patents) the great demand for HUTCHISONISED MATERIALS—hard as granite, impervious to moisture, vermin, &c.; the cheapest and most durable for all buildings, hydraulic, paving, monumental and decorative work.—The profits are large.

Apply to HUTCHISON & CO.,
Tunbridge Wells, Kent, and Caen, Normandy, stating name, address, and capital at command.

N.B.—Houses cured of damp. The produce of soft stone quarries, chalk, plaster of Paris, wood, pasteboard, and all absorbent materials indurated to resist frost, vermin, &c.

LICENCES GRANTED.

PATENT IMPROVEMENTS IN CHRONOMETERS WATCHES AND CLOCKS.

E. J. DENT, 82, Strand; 33, Cockspur-street; 34, Royal Exchange (clock tower area), Watch and Clock Maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

ON RESIN AND WATER GAS.

BY ANDREW FYFE, M.D.
Professor of Chemistry, King's College University, Aberdeen.

[*Continued from July 27.*]

In this trial, the gas being of specific gravity 574, a foot would weigh 307 grains, and, therefore, in all 13,530 grains. The resin used was 35,000 grains, consequently the loss amounted to nearly ⅔ths. There was no distillation of volatile oil, the loss must, therefore, have been occasioned by the deposit of carbon; and as the loss was as great as when the other apparatus was used, and as the gas afforded was inferior in quantity and quality, I conclude that my own apparatus was equally good with it for the decomposition of resin. The composition of resin is 10 atoms carbon, 7 hydrogen, and 1 oxygen; the compound atom weighing 75, to that of hydrogen as 1. When decomposed by heat, were each atom of hydrogen to unite with an atom of carbon, they should yield 49 of olifiant of specific gravity 976. Resin, therefore, cannot afford beyond 65 per cent.—say, ⅔rds of its weight of heavy hydro-carbon gas, with perhaps the addition of a small quantity of carbonic oxide, and carbonic acid. But the gas afforded by the decomposition of resin, in the trials now recorded, even though it contained carbonic acid, was never of greater specific gravity than 657; there must, therefore, have been a large amount of light hydro-carbon, or a considerable quantity of uncombined hydrogen in it. It is in this way that we can account for the loss, even when there is no volatile oil distilled over. Each atom of light hydro-carbon gas that is formed, leaves an atom of carbon uncombined, because the hydrogen, in this case, takes up only half the quantity of carbon that it does when it unites with it to form olifiant gas. When any of the hydrogen escapes uncombined, then two atoms of carbon are left for each atom of hydrogen evolved; and as the weight of the carbon atom is 6 compared to that hydrogen as 1, we observe why the loss is so great when an escape of light hydro-carbon, and especially of free hydrogen takes place. Most probably there is not much escape of free hydrogen, the gas evolved, independent of carbonic oxide and carbonic acid, consisting chiefly of olifiant and light hydro-carbon. The olifiant in the trials now mentioned amounted to 8 per cent., the carbonic acid to about 6 per cent., leaving about 86 for the light hydro carbon, or upwards of 10 times the volume of the olifiant. Let us take a more favourable view of the case, and suppose that the light hydro-carbon is only six times the volume of the olifiant; then one atom of the hydrogen will take one of carbon to form olifiant, while the remaining six of hydrogen will take only three of carbon, thus leaving six of carbon, and allowing that the one of oxygen will unite with one of carbon, to form carbonic oxide, and which is the utmost that it can unite with, then there will remain five of the carbon in the retort. This amounts to 40 per cent. of the weight of the resin. I do not give this as what really occurs, but merely to show that there must be a great loss by the *present mode of decomposition*, and how we can account for the loss. Hence it is that we do not get so much gas as we should expect. I have said that the quantity may be considered to be from about 8 to 10 feet per pound. In the trials made by Prof. Daniell the quantity did not exceed 9 feet, and the perfection of his apparatus is admitted by all.

The deposit of carbon, to which I have now referred, is a source of very great inconvenience, from its choaking up the retort, and preventing the proper decomposition of the resin. Hence the necessity of frequently cleaning out the retorts.

In the instance to which I have referred, in preparing the gas according to Mr. White's plan, it was recommended, with the view of getting the resin to be more easily melted, and, when melted, to flow more easily into the retort, that it should be mixed with refuse from the kitchen, such as waste pieces of fat and dripping, &c., all which, being, as it was said, of no value, would increase the quantity of gas, and thus lessen the price of the raw material. I presume that no one will admit the truth of this statement. Cooks generally require all the waste fat and dripping they can get; and if these be removed, something else must be supplied, perhaps at a greater price. In manufacturing the gas with Mr. White's apparatus, to which I have referred, this practice was almost always followed. I was, therefore, anxious to test the quality of the gas thus afforded, and was kindly permitted by the proprietor to do so. In the trial the resin retort only was used, and the individual in the custom of manufacturing the gas had charge of the heating, &c.: 2¾ lbs. of resin and 2¾ lbs. of tallow were employed. After being cautiously melted and throughly mixed, the liquid was decomposed in the usual way, and afforded 43 ft. of gas of specific gravity 716—that is, 7·8 ft. per lb. It contained 8 per cent. of carbonic acid. The condensation by chlorine amounted to 13·25. The durability with the jet and 5-inch flame was 54′—that is, 1·1 foot per hour. With the jet the light was that of 1·4 candles per foot. Giving it the advantage of the argand, the light would, perhaps, have been about that of 2·5 candles per foot. This gas, the specific gravity of which was 716, weighed, therefore, in all 16,500 grs. The resin and tallow together weighed 38,500 grs. The loss was, therefore, nearly one-half of the materials employed in its manufacture.

Similar trials were made with oil alone, with my own apparatus, the retort having been brought to the usual degree of heat: 6½ lbs. of oil yielded 51 cubic feet of gas of specific gravity 806—that is, 7·8 ft. per lb.; with the jet, the durability was 68′ 20″—that is, 0·87 of a foot per hour. It contained 6 per cent. of carbonic acid. By the jet the illuminating power was 3·75 candles per foot; by the argand, 5·6 candles per foot. The gas being of specific gravity 806, and 51 ft. from 6½ lbs., the loss was upwards of one-half of the material employed in its manufacture.

It is generally allowed that, by cautiously conducted trials, a gallon of oil will yield about 100 ft. of gas; but this is seldom obtained in practice, unless when the gas is of inferior quality; for, it is well known that, by a particular mode of decomposition, a large quantity of poor gas may be procured. I have seen oil gas of specific gravity 940. That referred to by Dr. Henry, in his trials with it, was 906. In numerous trials which I made, many years ago, at the oil-gas works at Leith, and also with a small apparatus erected for lighting a manufactury in Edinburgh, I did not find the specific gravity to be beyond 710. In some instances it was only 645. The gas of specific gravity 710, was at the time considered to be of good quality. The condensation by chlorine amounted to 32 per cent. The quantity of gas obtained from a given weight of oil was not ascertained, but let us suppose that it came up to the full allowance—that is 100 feet from a gallon, then the loss amounted to nearly one-half. Taking the gas of specific gravity 906, there must have been a loss of about one-third, supposing that 100 ft. were procured from the gallon; but of this I have my doubts I am inclined to think that in *practice*, there is in the conversion of oil to gas, a loss of about one-half; and that, therefore, in the trials which I have recorded, the loss was not greater than that which usually occurs. If it be thus with oil, I suspect it will be found to be at least to that extent with resin. In Mr. White's statement (No. 15 of Journal), 10,000 ft. of gas are got from 6 cwts. of resin, with an additional quantity of water. It is understood that Mr. White's gas contains about equal volumes of resin gas and of water gas, very frequently more of the latter; therefore, from the 672 lbs. of resin, about 5000 ft. of gas are got—that is, 7·4 ft. from the pound. The gas is said to be of the specific gravity 924, if so, the loss is nearly one-half. If we take the appended statement—viz., that the quantity of resin used was upwards of 7 cwts., then the loss must have been much greater.

I come now to consider the quality of the water-resin gas, or, as it is very improperly called, the hydro-carbon gas, and its value for the purposes of illumination. This gas is generated by the decomposition of water and of resin in separate retorts; the former being decomposed by heat, the latter by heat with the aid of carbon and of iron. If what I have already laid be correct, it is evident that the gas thus produced is merely a mixture of resin gas—that is of a gas resembling coal gas in its composition—and of hydrogen, with variable proportions of carbonic oxide and carbonic acid, according as the water is decomposed. I regret that I cannot give the results of the manufacture of the gas by the apparatus erected under the superintendence of Mr. White, as I fully expected to have been able to do. In the different attempts which I made to ascertain the quality of the gas manufactured by that apparatus, several circumstances occured to prevent me from arriving at the truth. In the first trial I found the gas of high illuminating power, but it was afterwards ascertained that tallow was mixed with the resin; in what proportion I did not hear. At my next visit the gas was made by using both retorts, employing resin for the one, and water for the other; but it was afterwards discovered that the water retort was not in action, consequently, the gas collected was entirely that from the decomposed resin, or a mixture of resin and tallow. I was obliged, therefore, at that time, to give up the attempt, not from any unwillingness on the part of the proprietor, for he was extremely anxious to ascertain the truth, but from the difficulty of getting the apparatus into proper working condition, though it had been erected for a very short time. This put a stop to future proceedings. I do not, however, consider this of great consequence. I have ascertained the quality of resin gas, of gas from mixture of resin and tallow, and of water gas, *separately*, and as these, by Mr. White's process, are generated in separate retorts, we must consider the gas thrown into the gasometer to be merely a *mixture* of those mentioned, in variable proportions, according to the proportions of the articles employed in their manufacture, and the rapidity with which the one and other is decomposed. We can thus arrive at the quality of the hydro-carbon gas, as it is called, and its consequent expense for the purposes of illumination, as compared with other sources of light, as, for instance, with coal gas. [*To be concluded in next week's Mining Journal.*]

EARLY HISTORY OF THE IRON TRADE.—The export of English iron was at that time very small. Biscay, then, as now, the most flourishing part of Spain, was the great iron country of those days. Considerable quantities of Biscayian iron were imported into Liverpool. The quality of the Spanish iron was much superior to that of the English. Camden, speaking of the iron trade in the great forest of Andradswald, in Sussex (then the greatest iron district in England), says it was less tenacious than the Spanish iron, either from nature or want of skill in the manufacture. The Forest of Dean was the second iron district in England in extent; and the manufacture was carried on in many parts of the kingdom, amongst others at Bury, and at Furness, in Lancashire. It ceased about Bury in the reign of Henry the VIII., from want of wood for the furnaces It was also suspended in the rich mineral district of Furness, in the reign of Queen Elizabeth, for the same reason. There the farm-tenants agreed to pay a bloomery rent to the lord of the soil, on condition that the furnaces should be blown out, and that the young trees, used in the iron manufacture, should be kept to feed their cattle in the winter months. So general was the alarm caused by the wasting of the woods in the manufacture of iron, that an Act was passed in the first year of Queen Elizabeth's reign, declaring that no timber, a foot square at the root, should be cut anywhere within 14 miles of the sea, or of the rivers Thames, Severn, Wye, Humber, Dee, Tyne, Tees, Trent, or any other river, to be used in making iron, except in Sussex and in the Weald of Kent, where the forests were then considered inexhaustible. A further Act was also passed in the same reign, in 1591, declaring that no iron-works should be formed anywhere within 22 miles of London. The following are the places at which iron was produced during the reigns of the Tudors:—The Weald or Wild of Sussex and Kent; the Forest of Dean, in Gloucestershire; Bury and Furness, in Lancashire; Blomefield and Ruabon, in North Wales; Walsall, in Staffordshire; and Lantrissant, in South Wales.—*Baines's History of Liverpool.*

PATENT METALLIC BLACK AND PURPLE-BROWN PAINT.—It is now upwards of four years since the Patent Alkali Company first introduced this paint, in which period ample opportunities have been given for thoroughly testing its properties, and from the testimonials received from parties who had made use of it, it would appear to possess all those advantages over lead paints which the patentees claimed for it at its introduction. It is a preparation of the peroxide of iron, ground in oil to about the consistence of ground white lead, but for use requires liquifying only by boiled linseed oil, instead of oil and turpentine. From the various testimonials which have been received from the several Government establishments, merchants, manufacturers, breweries, ship-owners and others who have used it, it appears that for iron work, and preserving it from rust, it is superior to any other paint. That it is pre-eminently adapted for all kinds of wood-work, stuccoed or brick buildings, as a substitute for tar in farm and out-buildings, park palings, &c.; and when any other colour is preferred as a finishing coat, the purple ground is most useful as a ground colour, saving one coat, and affording greater protection to the material covered. It has been used for ships, and exposed to the action of sea water for years without change.

NEW SANDSTONE FOR SHARPENING TOOLS, &C.—A very superior description of sandstone for grinding purposes has just been introduced by Mr. Meinig, of Southampton-street. It has lately been discovered in his stone quarries in Bohemia, and for fineness of grain, and bite on the metal being ground, is probably unequalled by any other stone yet found. The grain is so homogeneous throughout the mass, and every block so free from nodules, or hard or soft spots, that a grindstone retains its circular form to the last. It is stated, and from the texture of the stone we have no doubt such is the fact, that, compared with the best grindstones at common velocities, its cutting power is as two to one; but, from the fineness and equality of its texture, preventing all chipping and splintering, and allowing far greater velocity in its revolution, it has been found, from practical experience, that this sandstone will grind, according to circumstances, from four to eight times as much material, both as to time and wear, as the best grindstones hitherto in use, besides affecting a much finer and perfectly equal cut. It is sufficiently hard to cut quartz, and thus, in addition to its advantages for every description of steel tool, it is admirably adapted for opticians, dentists, lapidaries, and others who require a fine and sharp grinding surface. It is mounted in circular form of all widths and sizes, besides being formed into hones, and its granular structure is of that peculiar character which renders it probable that it will be brought into many uses to which grindstones have not hitherto been applied. Mr. Meinig turns his attention exclusively to this branch of the arts, and makes it his sole business. To any persons who take an interest in mineralogy, a visit to this establishment will be a treat, as Mr. Meinig has upwards of 100 different kinds of stones for grindstones, hones, &c.

NATURAL HISTORY, AND OTHER SPECIMEN PRESERVERS.—All persons who are in the habit of collecting specimens of minerals, insects, botany, or other branches of natural history, are of course aware how necessary it is to have them kept free from dust, and to preserve them from those damages to which they are subject through too rough handling by the incautious or inexperienced. Persons so collecting will doubtless be happy to be informed that Mr. Norris, of Dorchester-street, New North-road, Hoxton, fancy box manufacturer, has introduced a novelty in its way, which will effectually secure the objects here alluded to, at little expense, and with much elegance in appearance. They consist of card-board boxes from the size of a shilling upwards, having a transparent glass top securely fixed in, lined with pure white, or natural tint, according to the colour of the object, and by which specimens may be closely viewed without the slightest danger of damage, dust, or derangement. In some there is a glass bottom also, so that an object fixed in, can be viewed on both sides with equal facilities. They are covered with elegant coloured papers, are certainly a neat addition to the successful study of these pleasing sciences, and are rendered at a very moderate price.

ON THE APPARENT CONTRADICTIONS OF CHEMISTRY.—During the past week, Mr. Pepper has been delivering a series of lectures on this subject, with illustrations of the fiery ordeal and the handling of red-hot metals, at the Royal Polytechnic Institution. The lecturer commenced by exposing the impositions practised by the ancients in this delusion, and explained that, in course of time, and by the application of certain liquids &c., the hands and feet might be made to assume the condition of a non-conductor, and for a given time would bear contact with red-hot metals, without sustaining injury. To illustrate, the Professor, after having dipped his hand in certain liquids, was enabled on this principle to take out an egg from boiling water, and afterwards exhibited the astonishing feat of plunging his hand into a cauldron of molten lead. The last experiment he performed by first wetting the hand with sulphurous acid, which was kept in a liquid state by a freezing apparatus, invented by Mr. Masters, of Regent-street, several specimes of them being placed on the lecture-table, and were highly extolled by the lecturer, during his discourse, for their value and uses.

THE "GREAT BRITAIN" STEAM-SHIP.—It is reported that this steam-ship is about to be purchased by a firm connected with the emigration trade, with the intention to fit her up for the conveyance of passengers on the Pacific, between Panama and San Francisco: 25,000 is mentioned as the sum demanded, and it is stated that the command will be given to an officer now engaged in the Halifax squadron. We are not able to guarantee these reports, but we believe some ground exists for them generally.—*Liverpool Albion.*

THE SALTPANS OF SOUTH AFRICA.—The saltpan to which we had come was of an oval shape, and about a quarter of a mile in diameter. It was a low basin, whose sides sloped gently down, but the middle was a dead level of fine sand. Upon this sand, throughout the greater part of the pan, lay a thick layer of good coarse salt, varying from one to four inches in depth. Heavy rains filled the pan or basin with water, and, the dry season succeeding, the water disappears and large deposits of salt are found. These pans, or salt-licks, are met with in several parts of South Africa Those which mainly supply the colony with good salt are situated between Utenage and Algoa Bay; they are of considerable extent, and yield a surprising quantity. Ostriches, and almost every variety of antelope, frequent these pans for the purpose of licking the brack, or salt, ground, to which they are very partial.—*Cumming's Adventures in South Africa.*

A TURKISH MINISTER'S BOND.—In the month of January there was a great dearth of English coal, as well as of native charcoal: coals were wanted for the Turkish steamers and for the arsenal: the want was immediate and most serious. Mr. W. K——, an English merchant long established in Galata, had two cargoes at hand. Petmez Oglou, an agent for purchases and a general jobber to the arsenal, applied to Mr. K——, and entered into a contract with him for these two cargoes and for several other cargoes of Newcastle coal. In the course of February the two cargoes were delivered, another cargo came in, and others were on their way from England, the shippers relying on the contract; but, suddenly and unexpectedly, a little fleet of colliers came up the Dardanelles, and brought down the price of coals. Petmez Oglou would no longer abide by the bargain he had made; he would not even pay the stipulated price for the coals which had been delivered; he would take no more coals from Mr. K——, unless he gave them at the price now current. When the contract and his own signature were shown to him, he laughed at both.—*Turkey and its Destiny*

INSTITUTION OF MECHANICAL ENGINEERS.

A general meeting of members of this institution was held on Wednesday, the 24th July, in their new rooms, Newhall-street, Birmingham, where accommodation for the public business, and for occasional visits of members, have been provided. As was remarked by Mr. M'Connell, the new arrangement must be of considerable advantage, especially to members resident in the locality, for all the engineering periodicals of the day are received, and already there is the nucleus of a mechanical and scientific library. On Wednesday the chair was occupied by Mr. M'Connell, in the absence of the president, Robert Stephenson, Esq., who was superintending the floating of the last tube of the Britannia Bridge.

Before the commencement of the regular business, the Chairman took occasion to announce, that to mark his sense of the importance of the institution, their worthy president had given a donation to its funds of 100*l.* He (Mr. M'Connell) might also inform the meeting, that the funds and prospects of the institution were never in a more flourishing position. They were now in a house of their own, with accommodation for the members, and where their able secretary would always be to afford information and assistance. They hoped soon to add to the usefulness of the institution by a good mechanical and engineering library for reference. Of course, the realisation of this hope would very much depend on the liberality of the members. He concluded by proposing a vote of thanks to Mr. Stephenson for his donation, which was carried by acclamation.—The first paper read was one by Mr. WILLIAM SMITH,

ON THE CONDENSATION OF STEAM IN THE ENGINES OF THE SOUTH STAFFORDSHIRE IRON DISTRICT, AND THE IMPROVEMENTS TO BE EFFECTED IN THEM.—It will be remembered that the paper was read at the January meeting in this year, and the discussion adjourned until the present meeting. In our report of the former [see *Mining Journal* of Feb. 3rd] we stated the substance of the paper; but, as the subject is of vital importance in that district, and generally so, we briefly refer to the practical results of the writer's carefully digested observations. Mr. Smith's object, then, was to show by a series of 48 indicator diagrams, the present working condition of some of the largest class of mill, forge, and blast-engines in South Staffordshire, especially with reference to their imperfect vacuum, and the consequent loss of power resulting therefrom. The paper was illustrated by a series of diagrams. The improvements by which Mr. Smith proposes to remedy the prevailing defect, are a proper proportion of valves and passages, a more efficient plan of condensation, and a more perfect mode of applying expansive action, by lifting each valve by a separate cam. The practical results of Mr. Smith's inquiries are—a loss to the owners of these 45 engines, from their defective construction and action, amounting to 18,610*l.* per annum, or 2*l.* 7*s.* 7*d.* per horse-power per annum. The total steam-power employed in the manufacture of iron in this district may be computed to be fully ten times the nominal power of these engines specified, consequently, the total loss to the proprietors from the causes described may be taken in round numbers at the enormous sum 180,000*l.* per annum, besides the inevitable loss resulting from the tear and wear of the boilers, caused by the extra quantity of fuel consumed.—Some conversation followed the reading of this paper, Mr. M'Connell, Mr. Slate, Mr. Cowper, Mr. Bowman, Mr. Thomas Thorneycroft, and others expressing their approval of the experiments and conclusions of Mr. Smith.—Mr. Slate remarked that the facts were very important and startling. In the present depressed state of the iron trade it became imperative to study economy, and here it was proved by facts that could not mislead, by diagrams which bore out the statements, that the enormous sum of 180,000*l.* a-year was more than thrown away. He recommended the fact to the attention of the ironmasters of the district.—Mr. Smith remarked that steam-engines were not treated like any other piece of machinery. If a chronometer refused to register correctly it was at once sent to be repaired. Other machines, if they did not do their work properly, must stop; but the poor old steam-engine, after 20 or 30 years' labour, has no such attention paid to it. An extra application of the coal-shovel, or peradventure a tinkering with a hammer, and on it goes. He was of opinion that all this must be changed; it would be found necessary, as a measure of economy and sound principle, for every possessor of an engine to maintain and renovate the constitution of that engine, as he would do any other piece of perishable machinery.— Mr. Cowper remarked on the great importance of an efficient distribution of the injection water, as pointed out in Mr. Smith's paper; and he described an improved injection valve, which he had adopted very successfully. Mr. M'Connell considered that the institution was indebted to Mr. Smith for his valuable suggestions, and if so, how much more deeply indebted were those for whose benefit these researches were made? For the ironmasters of this district the subject was of vital importance. He recommended the facts to their serious attention, and trusted that Mr. Smith would persevere in his valuable inquiry.—A vote of thanks was passed to Mr. Smith, at the suggestion of the Chairman.

ON A BLOWING ENGINE WORKING AT HIGH VELOCITIES: BY MR. ARCHIBALD SLATE.—Mr. Slate proposes this as a substitute for the old blowing-engines for blast-furnaces, working with a slow action; large, cumbrous, and expensive, and imperfectly performing their work. The construction of the proposed engine is—two blow cylinders, 30 inches diameter, and 2-feet stroke, with their pistons fixed on the same piston-rods as the pistons of the steam-cylinders, which are connected to two cranks fixed at right angles to each other on the same shaft. The slide valves of the steam cylinders are worked by eccentrics on the cranked shaft, and the cranks at the outer end of the same shaft work the slide valves of the blowing cylinders. The arrangement of the blowing cylinder cannot be fully explained without the drawings. Mr. Slate estimates the direct saving from the adoption of his plan at between 65 and 70 per cent.; the price of a pair of the best ordinary blowing-engines, for three furnaces, being 3650*l.*, while in the proposed plan they would cost 1100*l.*, or if high pressure and condensing, 1350*l.*, including in each case the engine-house, but not the boilers.—Considerable discussion arose on this paper, more particularly in reference to a comparison between the fan blast and the mode proposed by Mr. Slate.—Mr. Slate said he had no intention to make any such comparison, but since the subject was introduced, he expressed his preference of the cylinder-blast to that of the fans, as he considered that the latter caused the lining of the furnace to burn away faster.—Mr. Cowper and Mr. Robinson were of opinion that the fan-blast was preferable for cupolas, and did not cause more repairs of the lining.—Mr. Smith remarked that the question started by the paper was, the superiority of Mr. Slate's blast-engine, working at a high velocity, over the ponderous engine at present in use for blast-furnaces, to which the fan-blast was not applicable.—The Chairman conveyed the thanks of the meeting to Mr. Slate, and the further discussion was reserved until the production of a promised supplementary paper on the important subject.

ON A NEW RECIPROCATING ENGINE: BY J. A. SHIPTON, MANCHESTER.—The subject of this paper was an engine of the reciprocating class, differing from the ordinary engine in the means adopted for obtaining the revolving motion direct out of the rectilinear; the principle through which power is obtained being the same as the ordinary reciprocating engine—viz., a piston acted upon by steam, being propelled in a rectilinear direction, but a revolving motion being combined with it. The steam chamber or cylinder is the same as in ordinary rotary engines, in which an excentric piston, turned true on the periphery, revolves. This piston is keyed on to a shaft carried on rods vibrating from the crank shaft pedestal. In each end of the piston are turned conical seatings, into which are fitted rings of metal, cut open on one side, and having a lap joint, to prevent the escape of steam. This is a very imperfect description of the engine, the absence of models and drawings rendering it necessarily so. The inventor stated that he had had an engine constructed on this plan at work for seven months in Wolverhampton. He had a second engine working at Manchester, alongside of an ordinary high-pressure engine, and had found, by working the two engines alternately, that there was a saving of 10½ per cent. of the fuel with his engine, the work done and the boilers used being the same in each case. —Mr. Robinson remarked that the principle was precisely the same as one projected many years ago, but never carried out. He did not doubt that a good engine might be made of it. Some observations were made as to the comparative power of this engine, but no sufficient data existing, it was recommended that the inventor should test the capabilities of his engine accurately, by a dynamometer and indicator, and communicate the results.—A vote of thanks was given to Mr. Shipton, who promised the result of a more complete trial.

ON THE FORM OF SHAFTS AND AXLES: BY MR. THOMAS THORNEYCROFT.—This paper consisted of an exposition of what the writer considered the true theory of the form of shafts, &c., whereby the elements of self-destruction, which more or less existed in all matter, were reduced to their minimum. This principle, applied to railway axles, had been practically tested, and the writer illustrated his remarks with drawings of a series of experiments made upon axles of different forms, and by the axles themselves on which the experiments were made. The conclusions at which the writer arrived were, that neither shafts nor railway axles ought to be reduced in the middle, but rather, if there is to be a departure from the parallel form, they should be made thickest in the middle, so as to avoid vibration or bending.—The discussion on this paper was adjourned till next meeeting.—*Birmingham Journal.*

BRITANNIA METAL JUGS.—We have had shown to us a sample of a rather novel application of Britannia metal in the manufacture of domestic utensils. It was a large water-jug, an elegant well-shaped pattern, with German silver mountings, and presenting a very handsome appearance. Metallic jugs of small capacity are not uncommon, but we understand that none of this size, or approaching to it, have previously been made in Sheffield. If they can be produced moderately cheap, as we understand they can, they will in all likelihood displace to a considerable extent the china jug. This jug has a richer appearance, and possesses the important advantage of less liability to be broken. Used for hot liquids, too, it has a decided superiority, independent of having a close-fitting lid. Due pains being taken to make this description of jug well known in the country, there is a fair chance of its becoming a not unimportant article in one department of our staple industry.—*Sheffield Times.*

Original Correspondence.

ON GRANTING LICENSES TO WORK MINES.

SIR,—Seeing in your valuable columns of late some remarks on the impropriety of landowners refusing to grant leases for mining, I now beg to call their attention to this subject, by remarking that it is for the public interest, as well as the lords', that setts should be granted where there is a prospect of mines becoming remunerative. Nature has so placed us, that one man is to live by the works of another: if all men were to act in opposition to each other, and contrary to this law, nothing could go on and prosper. Most men follow some religious creed, which has a law founded on the principles of justice, and I venture to ask if there is any branch of our native industry so much opposed as mining generally, and by those whom we may fairly term well-educated men, and the very men who have a chance of reaping the greatest benefit by it. Do these men live up to the law of the creed they follow? Are they guided by the law of live and let live? I think not: a large portion of them oppose a commonwealth cause, although they cannot go one day without the materials which this class produce. A man wishing to have a grant of a piece of land, where there is a prospect of finding a productive mine, first applies to the steward for a license, to which the general answer is, "The proprietor dislikes mining, and is not inclined to grant it." If, perchance, he should be more civil than the general average of stewards, he may say, "I will speak to him on the subject," and, after some half-a-dozen journeys, you may probably get an answer, that the lord does not like to have his game disturbed; should that point be got over, you may have a letter of license to try a few pits, subject to high dues, with strong restrictions to fill it all in, and make good the land, if nothing is found—the latter clause all very good.

I would next point out a case of a person applying for an iron grant on a barren hill, not worth a shilling per acre. After some dozen journeys, a license was obtained from a steward on very restrictive terms. The party commenced operations, and in a few days discovered a good lode of iron ore, when the steward quickly sent him a bill of 3*l.* for the unstamped letter of license; the party not relishing the bill, asked what the charge would be for a lease? the answer returned was, "It will be a mere trifle; we will prepare and hand you the draft;" which soon made its appearance, and was said to be very short, only 108 folios; and, after the first few usual forms, it commenced with restricting the parties from employing any person but those living in the two parishes the land was in, and the party was to pay them such wages as the landlord thought proper, and in no case to pay less wages than was paid to ironminers in Wales; a separate agent was to be employed for every shaft or pit, to watch his interest, and the party working the land to pay them at all times; when ther were] 50 tons of ore on the surface it should be weighed, and the dues paid These are only a few of the outlines: the party at once refused to take such a lease, when a bill was quickly forwarded for 13*l.* more for this draft, and all for opening four or five pits for iron ore, worth about 4s. a ton on the spot. It is these things that prevent many productive mines from being opened. I admit that all parties are not met in this way; but it is too often the case, that parties are put to such extra trouble and expense to obtain a fair and eligible lease, as to dishearten the applicant, and cause him to abandon it, and the mine often remains unworked for years. I contend that it would be for the interest of the landowner and the public, if a more concise or abridged lease was got up as a general form for all mines, only varying as to dues, and a few minor points, with a fixed price. It would be far more beneficial to the landowner, adventurer, and public generally, if applicants were met in a more liberal way. Many landlords object to grant setts without a company is first formed. Let us suppose a man knew of a promising lode; what would be the use of his going into the market to get parties to join him to carry it out, without first obtaining the grant? Who would countenance the man? Most lords also object to grants to labouring men, which I consider is treating them very unfairly. It is the poor man, in nine cases out of ten, who first discovers the lodes, but of which he cannot take advantage, he being a man of straw. Will any landlord show the public what damage he could sustain, if he granted these men a letter of license to open pits and work for one year, and then to grant him a regular lease, if a responsible man or a company was produced? if they failed to do so, his year's license terminated, it is again in the lord's hands; but the reply is, the poor man will open a great many pits, and leave them unfilled. This would not often happen. Admitting it did, a sovereign will pay for filling in as many pits as cost the poor man 5*l.* to dig them; in that case this man has spent 5*l.* to the lord's one, in developing the back of a lode that may some day remunerate the owner with thousands, and the poor man never recovering a shilling for his labour. Should he discover a lode worth notice, parties will quickly join him, and he would get remunerated for his trouble. There are hundreds of lodes known to labouring men that would be opened and tried if the lords were more liberal, and granted to any labouring man that applied. Was it my case, I should prefer granting to these men, as they would, from their practical knowledge, select the most promising lode to risk their own labour on.—N. ENNOR: *Wivellscombe, August 5.*

CARN BREA MINING COMPANY.

SIR,—When you stated "that the sett of South Carn Brea originated, you believed, with the Carn Brea Company, under whose management it is to be conducted," you inadvertently fell into an error—that statement is not literally, although substantially, correct. The lease of South Carn Brea was granted on most favourable terms by Lady Basset to Joseph Lyle, Esq., of Bonython, who is also the lessee of the Carn Brea Mines, North Basset, Wheal Grenville, and other important mines in that locality, the whole of which have been brought into profitable working under his auspices, and mainly by his instrumentality. The sett, therefore, "originated" not with the Carn Brea Company, who are necessarily a fluctuating body, but with the founder of that company himself. The latter part of your statement is more accurate than the former, for the *management* of South Carn Brea is in the hands of Mr. Lyle himself, the largest shareholder, who is also the actual manager or superintendent of the Carn Brea Mines. (See published report of Carn Brea for the past year.) I do not understand who assume to be "the directors of the Carn Brea Mines;" no such personages are recognised in mines conducted, as this is, on the Cost-book System. Your statement, after all, was not so very inaccurate, and was merely given as your *belief*; however, it has served to bring out the facts.

London, August 8. A SHAREHOLDER IN SOUTH CARN BREA.

THE CARN BREA GROUP OF MINES.

SIR,—I noticed in your Journal of Saturday last an article referring to the Carn Brea group of mines, wherein the writer attempts to draw a parallel between the extraordinary riches of the Great Devon Consols and what is, according to him, to result from the working of the South Carn Brea setts. The object is palpable enough; that he will so easily gull the public is not quite so obvious; but he proves to demonstration that he knows nothing of mineral veins nor mining operations. That Carn Brea has been, and still is, a rich and productive mine is not to be denied; but may I ask how does the comparison hold between these mines and the Great Devon Consols—the first-mentioned being in a granite, whilst the latter is in a slate or killas strata, the mines being about 70 miles apart from each other? But the writer's knowledge of the subject upon which he writes amuses me vastly. In reference to the Great Devon Consols, he says, "The lode lay so deep that it required immense steam-power to keep the water from some 100 fathoms or more in depth," whereas there is not a word of truth in the statement. The ore backed up to within 10 fathoms of the surface, and was discovered simply by the application of a small water-power. Cornish geese are proverbial for their propensity to gobble up the tin; and he would be deemed in the mining districts a very silly goose who did not understand that the backs of mineral veins or lodes are always traceable directly under the alluvial soil. But may I ask, what is the extent in length and width of this sett of South Carn Brea? The name implies that it runs parallel with the Carn Brea mines. From my perfect knowledge of the locality, I should say there might be a strip of land left between Carn Brea which reaches to the brow of the hill on the one hand, and North and West Wheal Basset, situate on the southern slope of the Carn Brea hill, on the other, sufficiently capacious for the site of an engine-house; but, as Mrs. Glasse very quaintly remarks, "First catch your hare," &c. So, I say, first let the writer find a lode, before talking of erecting patent steam-engines; he would find ordinary ones rather too expensive for such an undertaking. But, seriously, I am perfectly acquainted with the whole locality, and am not aware of there being the slightest trace of a lode in the piece of ground between the Carn Brea Mine and North and West Basset, even if there be room for one of ordinary dimensions. It by no means follows, because the Carn Brea mines are rich on one side, and the North Wheal Basset mine is said to be rich on the other, that the narrow slip of intermediate and parallel ground should contain a particle of metallic ore. And pray, where is the writer to find the mass of ore which is to pay for all the plant—prodigious!! who put it there? as he describes it at the 75 fathom level adit. The attempt, in all likelihood, would be—

> "As vain as those who, when the moon,
> Bright in a crystal river shone,
> Threw casting nets, as subtlely at her,
> To catch and pull her out of the water."

Redruth, July 29. AN OBSERVER.

TREGEAR CONSOLS—ST. KEW, CORNWALL.

SIR,—Knowing your readiness at all times to furnish the best information obtainable for the benefit of mining adventurers, *as a shareholder of the above mine*, may I be permitted to inquire if a general meeting *has ever been held* for the exhibition of accounts, and for the purpose of showing how the funds have been applied? The rules show that a monthly meeting of shareholders shall be held, for the purpose of inspecting accounts, &c., *but I have looked in vain for such meeting*; nor can I obtain any satisfactory account what is doing on the mine. Now, Sir, mining generally (as a valuable source of investment, when judiciously and honourably prosecuted) is seriously injured by *such practices*, and many a valuable mine has been stopped for want of confidence in its management. Adventurers are not all practical men, nor have they, at all times, the means, or opportunities, of seeing the concern in which they have made their investments; they, therefore, are compelled to trust to the good faith of those to whose management it is confided. Surely, it cannot be to the interest of any mining company to withhold such statement of accounts at the periods mentioned in their rules; and I cannot conceal that my suspicion is awakened that all things are not quite right *when accounts are kept from the light.*—A CONSTANT SUBSCRIBER: *London, July 31.*

THE AUSTRALIAN MINING COMPANY.

SIR,—In the report of the directors read at the meeting of the 29th, they say—"Having waited to see if the progress of colonial smelting would open a new channel for their being realised on the spot, they have finally determined on having all the poorer ores washed and dressed to a higher per centage for shipment home." In this report we are not told the progress that the colony has made in smelting, and it certainly would have been desirable if some further information on the subject had been elicited. From the accounts which have from time to time appeared in the *Mining Journal*, it would seem the smelting works in the neighbourhood of Adelaide had progressed in a satisfactory and rapid manner, while those at Burra Burra were returning large profits. These last mines, I believe, lay about 80 miles from Adelaide, the Tungkillo property 34 miles. The freight on the ores to London is 3 guineas per ton, with 5 per cent. primage, and it must then be re-shipped to Swansea before it can be realised, entailing double waste, double insurance, and all the concomitant charges. In order to dress the ores to a per centage sufficient to pay all these charges, great quantities of a lower value must be thrown away, or put to pile as halvans, to be stamped and buddled at some future period. We are told that fire-clay, and all the materials for building, are in the colony, and surely it would be better to erect small smelting works for the reduction of the ores, both of a higher and lower per centage, on the spot, than enhance their value to benefit the Welsh smelters. A smelting works, sufficient to smelt the ores raised at the Tungkillo Mines, might be erected for 3000*l.* or 3500*l.*, which could be increased in the same ratio as the produce of the mines. I am aware that, while so much has been expended in the purchase and development of the property, and no dividend as yet received, it may appear to some parties unreasonable to ask the shareholders to make further advances, and whatever advantages were held out to them would, no doubt, be regarded with considerable distrust, and looked upon with a suspicious eye.

The freight of coals from Newcastle (New South Wales) cannot be near so much as the freight of the ores from South Australia to England; and, by a small outlay, the shareholders would not only effect a great saving in freight and all charges, but receive the double profit of smelter and miner. It will, I dare say, be thought premature at this time to broach the subject, but I certainly think, if the company do not take up the question themselves, it would be a profitable speculation for competent individuals to erect small smelting works, about the size of those on the Elbe, for the purpose of purchasing ores from the mines. They could afford to give as high prices as the British smelter, the miners would pay no other charges than cartage, and at the same time, a quick outlet being raised for the produce would greatly stimulate mineral industry in the colony. As the ores have first to be realised before the money can be obtained, but few private individuals are enabled to be a twelvemonth in advance of their capital; consequently, none but companies can carry on these works, and that at a lower rate of profit than otherwise would be the case. Although occasionally some brilliant speculations occur in mining, both at home and abroad, these are the exceptions; very many are only steady-going concerns, where nothing can be afforded to be thrown away, and it is to their advantage this would especially apply. The proximity of the colony to the Indian market would give the smelter an easy facility of disposing of his produce, and an early return for his investment. Should the company not deem this suggestion worthy of notice, I trust that it may be considered by those interested in the mineral wealth of South Australia, and the well-wishers to the colony. A SHAREHOLDER.

PELL *v.* COUCH.—At the Warwick Assizes, on Tuesday, an action was tried on a promissory note for 300*l.* by the endorsee against the endorser, and on a bill of exchange for 200*l.* by the endorsee against the acceptor. The defendant had pleaded several pleas, but those upon which the questions in the case turned were a denial of the endorsement of the note, and a denial of the acceptance of the bill.—The plaintiff is a farmer and grazier near Market Harborough, and the defendant had been engaged with the plaintiff's son in mining speculations in Wales. The one had been manager and the other purser of a mining company, called the Abergwessin Silver-Lead Mining Company, but the plaintiff's son ceased to be purser in Dec., 1847, and was now out of the country; and the defendant was dismissed in Sept., 1849. The maker of the promissory note was a Mr. Hungerford, of Langley-park, near Market Harborough, who took 50 shares in the company in Sept., 1846, and paid for them by the note in question, which he dishonoured, and which the plaintiff had cashed. Messrs. Couch and Pell were the payees of that note, and it seemed clear that whether the endorsement was written by Couch, the defendant, or his partner in the mining speculations, there was sufficient evidence of authority to bind the defendant. The bill of exchange was dated in June, 1847, and was said to have been given to the plaintiff to secure further advances made by him to his son and the defendant, but the defendant denied that he had accepted that bill at all. Two witnesses expressed their belief that it was his handwriting, and four that it was not; but there were other documents in evidence in the cause, which were admitted to have been written by the defendant.—The learned Judge told the jury to look at those documents, and endeavour to satisfy themselves on the question of handwriting.—The jury eventually found a verdict for the plaintiff—damages, 575*l.*

THE FLINTSHIRE MINERS.—Our readers are aware, from former notices, of the intractable state of the miners employed at the Milwr, Halkin, and Talargoch Mines, and their attempt to enforce a system of six hours working per day, instead of eight hours—the time employed in all the Cornish and other mines in England. We have before noticed several serious outbreaks; but the 30th July appears to have been fixed upon by the Halkin and Talargoch men to enforce it on the Milwr Mining Company, who had succeeded in keeping a sufficient number of men employed, and who seemed contented with the working hours. On the day mentioned, they collected to the number of 500, armed with sticks, and proceeded to the house of Capt. Francis, the company's agent, who, having been cautioned of the riotous intention, had left home to escape their threatened vengeance. They behaved in the most riotous manner, declared they would murder him, and one man carried a sack for the purpose of putting him in and burying him alive; and it is said a hole was actually dug for the purpose. They broke open the door, calling upon his daughter, Miss Jane Francis, to reveal his hiding place, and it was in vain she assured them her father was not in the house. They remained ransacking the house for two hours, and some of them drank a quantity of wine and spirits. Some would not touch it, for fear of its being poisoned. While the mob was in the house, Mr. Lightoller, a shareholder, went and tried to gain admittance; but he was surrounded, and made to sign a paper that six hours were enough for a day's work. A few police officers were of little use against such a mob, who seemed most inveterate against their employers. Several gentlemen, therefore, waited on the clerk of the peace at Mold, and informations were laid against the ringleaders—two of whom, W. Jones and Ishmael Blackwell, were taken by stratagem; but, the fact having got wind, the rioters assembled and started to Mold to rescue their companions, who, however, were discharged, as no one dared to give evidence against them. As there was no likelihood of an abatement of the outrage, a messenger was dispatched to Chester for the military; and, on Monday evening, a detachment of the 38th Foot arrived, and their presence has had the desired effect, as the district is now comparatively quiet.—At the Flintshire Assizes, on Friday, true bills were found against William Lloyd, Morgan David, Ishmael Blackwell, Edward Jones, John Edwards, and Francis Downing, for riot and conspiracy. Lloyd and David, who were the only two in custody, pleaded, and were allowed to traverse till the next assizes; and bench warrants for the apprehension of the remainder of the defendants were moved for and obtained. Lloyd and David were admitted to bail.

COPPER LODE AT PLYMOUTH.—In digging for the foundations of a new street in a field to the north of Plymouth, near the new Prison, it is said, that strong indications have been discovered of the presence of a lode of copper ore, and that, in consequence, competent persons have been engaged, carefully to explore the ground. The lode, it is supposed, will trend towards the westward, crossing the Tavistock turnpike at North Hill, in which case it will fall into some land recently purchased by the Rev. John Hatchard, the Vicar of St. Andrew, who will, no doubt, not let so valuable a metal lie useless on his property.—*West of England Conservative.*

The *Banner of Ulster* mentions the arrival of a quantity of coals from the newly-worked Irish Colliery, of Murlaugh Bay.

IMPORTANT DISCOVERY OF IRON ORE ON THE SHORES OF LAKE SUPERIOR.—The *Pittsburgh American* describes a sample of iron ore recently received from Lake Superior:—"It is apparently a pure oxide of iron, and said to exist in immense bodies on the lake shore abounding in timber. It is from 65 to 70 per cent. pure iron. It is worked in refineries or bloomeries as pig metal, and the blooms, it is said by those interested, can be delivered in Pittsburgh at $40 per ton. Those which been brought are rough and uncouthly made, but the iron is of No. 1 quality. The workmen employed convert the ore into blooms for $8 per ton, the materials being furnished them. If this be so, and our account be from a reliable source, there is another revolution promised in the iron business of this country and the world."

LONDON AND NORTH-WESTERN RAILWAY.—This company are carrying out some extensive experiments in the way of a reduction of fares, with the view of testing the productiveness of the local traffic. Hitherto, the price of day tickets, for certain distances, has been two-thirds less than two fares, a further reduction upon which, to the extent of one-sixth, has been made.

FOREIGN INTELLIGENCE.

NEW YORK, JULY 23.—Advices from California had reached here to the 18th June, being 18 days later than the previous dates. Another awful fire had occurred at San Francisco; the destruction is estimated at $5,000,000, considerable part being in goods consigned, the loss of which would fall on the shippers, there being no means of insuring against fire there. A large trade was doing with the Australian colonies, and a great many passengers had arrived from thence. Some new discoveries of gold had been made in Oregon, and were exciting attention; it was thought probable that some emigration would be directed there. The accounts from the mines give assurance that there will be a greater quantity of gold dug this summer than before.

The *San Francisco Herald* of June 13, says:—"We scarcely know which valley, the San Joaquin or the Sacramento, has sent out the richest specimens; but the gold comes from both regions in sufficient quantities to prove that there was but little extravagance in the assertion that the ore is inexhaustible. It has been found, too, as far north as Oregon, and as far south as the mountains near Los Angelos. There appears to be a ridge of gold-bearing quartz running the whole length of the country, almost north and south. The ore has been found richer in the mountains of Los Angelos than even in the mines of Mariposa. We have seen large masses from both localities. As found in the former place, it will require the employment of science and machinery—the one to direct operations, the other for grinding the rock; and with these two agents engaged, it will afford, from the immense quantity that exists, sufficient employment and compensation to three-fourths at least of all the superfluous labour in the United States." This flattering account must, however, be received with some allowance for the sanguine temperament of new settlers.

The *Sacramento Transcript*, refering to some new discoveries, says—"The mines alluded to are situated in a range of low hills, lying in the valley of San Jose, between the Contra Costa and coast ranges of mountains, and four or five miles above the Pueblo. The gold is found in the form of ore, one species being clearly micaceous sandstone; the other, a blue compact stone, resembling talcose slate, without the slaty texture. Several specimens have been assayed, the highest assay yielding 87½ cents to the pound; the lowest, about 25 cents. So that it may be a safe computation at over 20 cents to every pound of ore for the whole mine. What is a little singular in the case, the people at San Jose think it is a silver mine, while there is not enough of this metal in the ore for the necessities of the assay. A company from the city have purchased the mining right of the whole range (consisting of several leagues) upon which the mine is located, and are about to commence extensive operations with appropriate machinery."

And in another instance the *Pacific News* states as follows:—"Several gentlemen, engaged in mining upon one of the northern rivers, in their explorations in the adjacent mountains during the past winter, came upon a vein of quartz, where the pure ore was observed in threads and spangles, beautiful to look upon. An examination took place, specimens taken from various portions of the rock, and such rude tests as were at hand applied with the most satisfactory and even astonishing results. The vein is about 80 ft. wide, and in some portions so rich as to produce a dollar to an ounce of rock! A piece was knocked off weighing 14 lbs., and submitted to the action of heat in a blacksmith's forge, when the amount of $32 was *smelted from the rock!* Not half of what it contained could be got out in such a way. Other specimens have yielded from $1 to $2 to 1 lb. of the rock, and the quantity of it is represented as literally inexhaustible. We shall have some specimens from these mines in a week or two, when we shall probably speak of it again. The mother mines of California are yet to be discovered, of which the gold in the rivers and ravines are but the disintegrated particles."

With reference to the reports of new and rich mines in Oregon, the *Oregon Spectator* says—"The opinion is gaining strength daily, that one of the richest mines on the shores of the Pacific has been discovered in the Spokan country, some 400 miles from Oregon city, and up the Columbia. We are assured by Capt. N. Crosby, who saw it, that the sand which was brought from the Spokan was, in its bulk, about one-quarter gold. The country in which this gold has been found is one of the healthiest in the world; and if the mines should be found to extend over a large region of that country, it will soon be teeming with an overflowing population, attracted thither by the double allurement of gold and health."

Grand discoveries are reported in the Scorpion Gulch, and on Feather River.

RICH DISCOVERY OF VEIN GOLD.—There is no doubt on our minds that the mineral wealth of California will be found incalculably greater than even the most sanguine have hitherto imagined. Every day's discovery goes to confirm this opinion; and facts within our knowledge warrant us in saying, that the present season will bring to light the most startling developments in vein or quartz mining. If in the low, or secondary hills, a few hundred feet in height only in the San Jose valley, rich mines of gold ore are found, of which we spoke yesterday, what may not be looked for in the explorations among the mountain ranges on either side? And if such results are found in the coast mountains, where no one expected much gold to exist, what will not the foot slopes of the Sierra Nevada disclose to the searching enterprise that is now actively employed amidst their gorges, and on the borders of their streams? We are led to these remarks from certain remarkable discoveries of quartz gold which have lately come to our knowledge from an unquestionable source. Several gentlemen, engaged in mining upon one of the northern rivers, in their explorations in the adjacent mountains during the past winter, came upon a vein of quartz, where the pure ore was observed in threads and spangles, beautiful to look upon. An examination took place, specimens taken from various parts of the rock, and such rude tests as were at hand applied, with the most satisfactory and even astonishing results. The vein is about 80 feet wide, and in some portions so rich as to produce a dollar to an ounce of rock! A piece was knocked off weighing 14 lbs., and submitted to the action of the heat in a blacksmith's forge, when the amount of $32 was smelted from the rock. Not half of what it contained could be got out in such a way. Other specimens have yielded from $1 to $2 to a pound of the rock, and the quantity of it is represented as literally inexhaustible. We shall have some specimens from these mines in a week or two, when we shall probably speak of it again. The mother mines of California are yet to be discovered, of which the gold in the rivers and ravines are but the disintegrated particles.—*Pacific News*, June 12.

The *Crescent City* has arrived from Chagres, with mails from San Francisco to the 15th June. Her passengers have $180,000 in gold dust, and there is a small amount on consignment.

The *Columbus* arrived at Panama on the 6th July, having left San Francisco on the 18th June. She brought 150 passengers and $130,000 in gold dust, on freight, and the mails. She was 17½ days from port to port—the quickest passage on record. The discovery of large gold deposits in Oregon has awakened considerable attention. The accounts are very authentic, and we think may probably have an influence to direct part of the current of emigration which is now on the plains.

The whole number of vessels which have sailed from the Atlantic ports for those of California, since the recent discovery of gold in that region, is 1257. Among them are included 30 steamers. The aggregate tonnage of these vessels is very nearly 400,000 tons, and had a canal existed, not one of them would have doubled Cape Horn.

We learn from the *Lake Superior Journal*, that the copper operations are progressing successfully: 26 tons of native copper in masses, some weighing over 4000 lbs., from the Minnesota Mine, had just reached the Sault. Larger masses are ready to ship; and the Minnesota bids fair soon to rival the noted Cliff Mine. The iron mountain region of Lake Superior is also attracting attention. The *Journal*, after stating that the Jackson Iron Company are about greatly to enlarge their works, further states that "the locality embraces a large portion of the Iron Mountain, and contains a sufficient quantity to supply the whole country for centuries. It is piled up in irregular stratified masses, easily split or broken up with a crow-bar and sledge-hammer; and one may break and throw together 50 tons of this ore in a day. To make bar-iron from this ore is a cheap and simple process, and the day is not far distant when the markets around the whole chain of lakes will be supplied with their best article of iron from the Iron Mountain of Lake Superior. A new iron company is to be immediately organised by Pittsburghers. John Hays, Esq., of Pittsburgh, has entered several tracts of land in the Iron Mountain region, and is on his way home for a large force of men and supplies."

It appears, by the last accounts from the United States, that it is no longer permitted for British and other foreign steamers to import and land coal for their own use on the return voyage. The representations of the merchants of Philadelphia, as to the unfavourable influence the system exerted over their own coal interests, has called forth the following circular from Mr. Meredith, the Secretary of the United States Treasury:—"In reply to an inquiry made at this department by a citizen of Philadelphia, I have to state that foreign coal intended for consumption in sea steamers, and placed in bonded warehouses under the provisions of the warehousing law, can be withdrawn from warehouse without payment of duties, only to be exported and landed abroad; and its consumption on board the vessel is not regarded as a landing abroad within the meaning of the law. There is another provision of the law, however, on this subject, to which it may be well to refer. By an Act of Congress of the 7th July, 1838, it is declared that it shall be lawful for the captain or master of any steam-boat, or vessel, propelled by steam, arriving at any port in the United States, to retain all the coal such boat, or vessel, may have on board at the time of her arrival; and that he may proceed with the said coal to a foreign port without being required to land the same in the United States, or to pay any duty thereon."

PLATINUM OF CALIFORNIA.—In a letter from J. E. Teschemacher, we are informed that he has detected a proportion of platinum among the grain gold of California, that will render it an important object of search in that region. In an ounce of the fine grains, he found about 50 granules, which proved to be this metal. He observes that the proportion obtained is about as large as from the South American mines.

ON RESIN AND WATER GAS.

BY ANDREW FYFE, M.D.
Professor of Chemistry, King's College University, Aberdeen.

[*Continued from July 27.*]

In this trial, the gas being of specific gravity 574, a foot would weigh 307 grains, and, therefore, in all 13,530 grains. The resin used was 35,000 grains, consequently the loss amounted to nearly ⅔ths. There was no distillation of volatile oil, the loss must, therefore, have been occasioned by the deposit of carbon; and as the loss was as great as when the other apparatus was used, and as the gas afforded was inferior in quantity and quality, I conclude that my own apparatus was equally good with it for the decomposition of resin. The composition of resin is 10 atoms carbon, 7 hydrogen, and 1 oxygen; the compound atom weighing 75, to that of hydrogen as 1. When decomposed by heat, were each atom of hydrogen to unite with an atom of carbon, they should yield 49 of olifiant of specific gravity 976. Resin, therefore, cannot afford beyond 65 per cent.—say, ⅔rds of its weight of heavy hydro-carbon gas, with perhaps the addition of a small quantity of carbonic oxide, and carbonic acid. But the gas afforded by the decomposition of resin, in the trials now recorded, even though it contained carbonic acid, was never of greater specific gravity than 657; there must, therefore, have been a large amount of light hydro-carbon, or a considerable quantity of uncombined hydrogen in it. It is in this way that we can account for the loss, even when there is no volatile oil distilled over. Each atom of light hydro-carbon gas that is formed, leaves an atom of carbon uncombined, because the hydrogen, in this case, takes up only half the quantity of carbon that it does when it unites with it to form olifiant gas. When any of the hydrogen escapes uncombined, then two atoms of carbon are left for each atom of hydrogen evolved; and as the weight of the carbon atom is 6 compared to that hydrogen as 1, we observe why the loss is so great when an escape of light hydro-carbon, and especially of free hydrogen takes place. Most probably there is not much escape of free hydrogen, the gas evolved, independent of carbonic oxide and carbonic acid, consisting chiefly of olifiant and light hydro-carbon. The olifiant in the trials now mentioned amounted to 8 per cent., the carbonic acid to about 6 per cent., leaving about 86 for the light hydro carbon, or upwards of 10 times the volume of the olifiant. Let us take a more favourable view of the case, and suppose that the light hydro-carbon is only six times the volume of the olifiant; then one atom of the hydrogen will take one of carbon to form olifiant, while the remaining six of hydrogen will take only three of carbon, thus leaving six of carbon, and allowing that the one of oxygen will unite with one of carbon, to form carbonic oxide, and which is the utmost that it can unite with, then there will remain five of the carbon in the retort. This amounts to 40 per cent. of the weight of the resin. I do not give this as what really occurs, but merely to show that there must be a great loss by the *present mode of decomposition*, and how we can account for the loss. Hence it is that we do not get so much gas as we should expect. I have said that the quantity may be considered to be from about 8 to 10 feet per pound. In the trials made by Prof. Daniell the quantity did not exceed 9 feet, and the perfection of his apparatus is admitted by all.

The deposit of carbon, to which I have now referred, is a source of very great inconvenience, from its choaking up the retort, and preventing the proper decomposition of the resin. Hence the necessity of frequently cleaning out the retorts.

In the instance to which I have referred, in preparing the gas according to Mr. White's plan, it was recommended, with the view of getting the resin to be more easily melted, and, when melted, to flow more easily into the retort, that it should be mixed with refuse from the kitchen, such as waste pieces of fat and dripping, &c., all which, being, as it was said, of no value, would increase the quantity of gas, and thus lessen the price of the raw material. I presume that no one will admit the truth of this statement. Cooks generally require all the waste fat and dripping they can get; and if these be removed, something else must be supplied, perhaps at a greater price. In manufacturing the gas with Mr. White's apparatus, to which I have referred, this practice was almost always followed. I was, therefore, anxious to test the quality of the gas thus afforded, and was kindly permitted by the proprietor to do so. In the trial the resin retort only was used, and the individual in the custom of manufacturing the gas had charge of the heating, &c.: 2¾ lbs. of resin and 2¾ lbs. of tallow were employed. After being cautiously melted and throughly mixed, the liquid was decomposed in the usual way, and afforded 43 ft. of gas of specific gravity 716—that is, 7·8 ft. per lb. It contained 8 per cent. of carbonic acid. The condensation by chlorine amounted to 13·25. The durability with the jet and 5-inch flame was 54′—that is, 1·1 foot per hour. With the jet the light was that of 1·4 candles per foot. Giving it the advantage of the argand, the light would, perhaps, have been about that of 2·5 candles per foot. This gas, the specific gravity of which was 716, weighed, therefore, in all 16,500 grs. The resin and tallow together weighed 38,500 grs. The loss was, therefore, nearly one-half of the materials employed in its manufacture.

Similar trials were made with oil alone, with my own apparatus, the retort having been brought to the usual degree of heat: 6½ lbs. of oil yielded 51 cubic feet of gas of specific gravity 806—that is, 7·8 ft. per lb.; with the jet, the durability was 68′ 20″—that is, 0·87 of a foot per hour. It contained 6 per cent. of carbonic acid. By the jet the illuminating power was 3·75 candles per foot; by the argand, 5·6 candles per foot. The gas being of specific gravity 806, and 51 ft. from 6½ lbs., the loss was upwards of one-half of the material employed in its manufacture.

It is generally allowed that, by cautiously conducted trials, a gallon of oil will yield about 100 ft. of gas; but this is seldom obtained in practice, unless when the gas is of inferior quality; for, it is well known that, by a particular mode of decomposition, a large quantity of poor gas may be procured. I have seen oil gas of specific gravity 940. That referred to by Dr. Henry, in his trials with it, was 906. In numerous trials which I made, many years ago, at the oil-gas works at Leith, and also with a small apparatus erected for lighting a manufactury in Edinburgh, I did not find the specific gravity to be beyond 710. In some instances it was only 645. The gas of specific gravity 710, was at the time considered to be of good quality. The condensation by chlorine amounted to 32 per cent. The quantity of gas obtained from a given weight of oil was not ascertained, but let us suppose that it came up to the full allowance—that is 100 feet from a gallon, then the loss amounted to nearly one-half. Taking the gas of specific gravity 906, there must have been a loss of about one-third, supposing that 100 ft. were procured from the gallon; but of this I have my doubts I am inclined to think that in *practice*, there is in the conversion of oil to gas, a loss of about one-half; and that, therefore, in the trials which I have recorded, the loss was not greater than that which usually occurs. If it be thus with oil, I suspect it will be found to be at least to that extent with resin. In Mr. White's statement (No. 15 of Journal), 10,000 ft. of gas are got from 6 cwts. of resin, with an additional quantity of water. It is understood that Mr. White's gas contains about equal volumes of resin gas and of water gas, very frequently more of the latter; therefore, from the 672 lbs. of resin, about 5000 ft. of gas are got—that is, 7·4 ft. from the pound. The gas is said to be of the specific gravity 924, if so, the loss is nearly one-half. If we take the appended statement—viz., that the quantity of resin used was upwards of 7 cwts., then the loss must have been much greater.

I come now to consider the quality of the water-resin gas, or, as it is very improperly called, the hydro-carbon gas, and its value for the purposes of illumination. This gas is generated by the decomposition of water and of resin in separate retorts; the former being decomposed by heat, the latter by heat with the aid of carbon and of iron. If what I have already laid be correct, it is evident that the gas thus produced is merely a mixture of resin gas—that is of a gas resembling coal gas in its composition—and of hydrogen, with variable proportions of carbonic oxide and carbonic acid, according as the water is decomposed. I regret that I cannot give the results of the manufacture of the gas by the apparatus erected under the superintendence of Mr. White, as I fully expected to have been able to do. In the different attempts which I made to ascertain the quality of the gas manufactured by that apparatus, several circumstances occured to prevent me from arriving at the truth. In the first trial I found the gas of high illuminating power, but it was afterwards ascertained that tallow was mixed with the resin; in what proportion I did not hear. At my next visit the gas was made by using both retorts, employing resin for the one, and water for the other; but it was afterwards discovered that the water retort was not in action, consequently, the gas collected was entirely that from the decomposed resin, or a mixture of resin and tallow. I was obliged, therefore, at that time, to give up the attempt, not from any unwillingness on the part of the proprietor, for he was extremely anxious to ascertain the truth, but from the difficulty of getting the apparatus into proper working condition, though it had been erected for a very short time. This put a stop to future proceedings. I do not, however, consider this of great consequence. I have ascertained the quality of resin gas, of gas from mixture of resin and tallow, and of water gas, *separately*, and as these, by Mr. White's process, are generated in separate retorts, we must consider the gas thrown into the gasometer to be merely a *mixture* of those mentioned, in variable proportions, according to the proportions of the articles employed in their manufacture, and the rapidity with which the one and other is decomposed. We can thus arrive at the quality of the hydro-carbon gas, as it is called, and its consequent expense for the purposes of illumination, as compared with other sources of light, as, for instance, with coal gas. [*To be concluded in next week's Mining Journal.*]

EARLY HISTORY OF THE IRON TRADE.—The export of English iron was at that time very small. Biscay, then, as now, the most flourishing part of Spain, was the great iron country of those days. Considerable quantities of Biscayian iron were imported into Liverpool. The quality of the Spanish iron was much superior to that of the English. Camden, speaking of the iron trade in the great forest of Andradswald, in Sussex (then the greatest iron district in England), says it was less tenacious than the Spanish iron, either from nature or want of skill in the manufacture. The Forest of Dean was the second iron district in England in extent; and the manufacture was carried on in many parts of the kingdom, amongst others at Bury, and at Furness, in Lancashire. It ceased about Bury in the reign of Henry the VIII., from want of wood for the furnaces. It was also suspended in the rich mineral district of Furness, in the reign of Queen Elizabeth, for the same reason. There the farm-tenants agreed to pay a bloomery rent to the lord of the soil, on condition that the furnaces should be blown out, and that the young trees, used in the iron manufacture, should be kept to feed their cattle in the winter months. So general was the alarm caused by the wasting of the woods in the manufacture of iron, that an Act was passed in the first year of Queen Elizabeth's reign, declaring that no timber, a foot square at the root, should be cut anywhere within 14 miles of the sea, or of the rivers Thames, Severn, Wye, Humber, Dee, Tyne, Tees, Trent, or any other river, to be used in making iron, except in Sussex and in the Weald of Kent, where the forests were then considered inexhaustible. A further Act was also passed in the same reign, in 1591, declaring that no iron-works should be formed anywhere within 22 miles of London. The following are the places at which iron was produced during the reigns of the Tudors:—The Weald or Wild of Sussex and Kent; the Forest of Dean, in Gloucestershire; Bury and Furness, in Lancashire; Blomefield and Ruabon, in North Wales; Walsall, in Staffordshire; and Lantrissant, in South Wales.—*Baines's History of Liverpool.*

PATENT METALLIC BLACK AND PURPLE-BROWN PAINT.—It is now upwards of four years since the Patent Alkali Company first introduced this paint, in which period ample opportunities have been given for thoroughly testing its properties, and from the testimonials received from parties who had made use of it, it would appear to possess all those advantages over lead paints which the patentees claimed for it at its introduction. It is a preparation of the peroxide of iron, ground in oil to about the consistence of ground white lead, but for use requires liquifying only by boiled linseed oil, instead of oil and turpentine. From the various testimonials which have been received from the several Government establishments, merchants, manufacturers, breweries, ship-owners and others who have used it, it appears that for iron work, and preserving it from rust, it is superior to any other paint. That it is pre-eminently adapted for all kinds of wood-work, stuccoed or brick buildings, as a substitute for tar in farm and out-buildings, park palings, &c.; and when any other colour is preferred as a finishing coat, the purple ground is most useful as a ground colour, saving one coat, and affording greater protection to the material covered. It has been used for ships, and exposed to the action of sea water for years without change.

NEW SANDSTONE FOR SHARPENING TOOLS, &C.—A very superior description of sandstone for grinding purposes has just been introduced by Mr. Meinig, of Southampton-street. It has lately been discovered in his stone quarries in Bohemia, and for fineness of grain, and bite on the metal being ground, is probably unequalled by any other stone yet found. The grain is so homogeneous throughout the mass, and every block so free from nodules, or hard or soft spots, that a grindstone retains its circular form to the last. It is stated, and from the texture of the stone we have no doubt such is the fact, that, compared with the best grindstones at common velocities, its cutting power is as two to one; but, from the fineness and equality of its texture, preventing all chipping and splintering, and allowing far greater velocity in its revolution, it has been found, from practical experience, that this sandstone will grind, according to circumstances, from four to eight times as much material, both as to time and wear, as the best grindstones hitherto in use, besides affecting a much finer and perfectly equal cut. It is sufficiently hard to cut quartz, and thus, in addition to its advantages for every description of steel tool, it is admirably adapted for opticians, dentists, lapidaries, and others who require a fine and sharp grinding surface. It is mounted in circular form of all widths and sizes, besides being formed into hones, and its granular structure is of that peculiar character which renders it probable that it will be brought into many uses to which grindstones have not hitherto been applied. Mr. Meinig turns his attention exclusively to this branch of the arts, and makes it his sole business. To any persons who take an interest in mineralogy, a visit to this establishment will be a treat, as Mr. Meinig has upwards of 100 different kinds of stones for grindstones, hones, &c.

NATURAL HISTORY, AND OTHER SPECIMEN PRESERVERS.—All persons who are in the habit of collecting specimens of minerals, insects, botany, or other branches of natural history, are of course aware how necessary it is to have them kept free from dust, and to preserve them from those damages to which they are subject through too rough handling by the incautious or inexperienced. Persons so collecting will doubtless be happy to be informed that Mr. Norris, of Dorchester-street, New North-road, Hoxton, fancy box manufacturer, has introduced a novelty in its way, which will effectually secure the objects here alluded to, at little expense, and with much elegance in appearance. They consist of card-board boxes from the size of a shilling upwards, having a transparent glass top securely fixed in, lined with pure white, or natural tint, according to the colour of the object, and by which specimens may be closely viewed without the slightest danger of damage, dust, or derangement. In some there is a glass bottom also, so that an object fixed in, can be viewed on both sides with equal facilities. They are covered with elegant coloured papers, are certainly a neat addition to the successful study of these pleasing sciences, and are rendered at a very moderate price.

ON THE APPARENT CONTRADICTIONS OF CHEMISTRY.—During the past week, Mr. Pepper has been delivering a series of lectures on this subject, with illustrations of the fiery ordeal and the handling of red-hot metals, at the Royal Polytechnic Institution. The lecturer commenced by exposing the impositions practised by the ancients in this delusion, and explained that, in course of time, and by the application of certain liquids, &c., the hands and feet might be made to assume the condition of a non-conductor, and for a given time would bear contact with red-hot metals, without sustaining injury. To illustrate, the Professor, after having dipped his hand in certain liquids, was enabled on this principle to take out an egg from boiling water, and afterwards exhibited the astonishing feat of plunging his hand into a cauldron of molten lead. The last experiment he performed by first wetting the hand with sulphurous acid, which was kept in a liquid state by a freezing apparatus, invented by Mr. Masters, of Regent-street, several specimens of them being placed on the lecture-table, and were highly extolled by the lecturer, during his discourse, for their value and uses.

THE "GREAT BRITAIN" STEAM-SHIP.—It is reported that this steam-ship is about to be purchased by a firm connected with the emigration trade, with the intention to fit her up for the conveyance of passengers on the Pacific, between Panama and San Francisco: 25,000*l.* is mentioned as the sum demanded, and it is stated that the command will be given to an officer now engaged in the Halifax squadron. We are not able to guarantee these reports, but we believe some ground exists for them generally.—*Liverpool Albion.*

THE SALTPANS OF SOUTH AFRICA.—The saltpan to which we had come was of an oval shape, and about a quarter of a mile in diameter. It was a low basin, whose sides sloped gently down, but the middle was a dead level of fine sand. Upon this sand, throughout the greater part of the pan, lay a thick layer of good coarse salt, varying from one to four inches in depth. Heavy rains filled the pan or basin with water, and, the dry season succeeding, the water disappears and large deposits of salt are found. These pans, or salt-licks, are met with in several parts of South Africa Those which mainly supply the colony with good salt are situated between Utenage and Algoa Bay; they are of considerable extent, and yield a surprising quantity. Ostriches, and almost every variety of antelope, frequent these pans for the purpose of licking the brack, or salt, ground, to which they are very partial.—*Cumming's Adventures in South Africa.*

A TURKISH MINISTER'S BOND.—In the month of January there was a great dearth of English coal, as well as of native harcoal: coals were wanted for the Turkish steamers and for the arsenal: the want was immediate and most serious. Mr. W. K——, an English merchant long established in Galata, had two cargoes at hand. Petmez Oglou, a nagent for purchases and a general jobber to the arsenal, applied to Mr. K——, and entered into a contract with him for these two cargoes and for several other cargoes of Newcastle coal. In the course of February the two cargoes were delivered, another cargo came in, and others were on their way from England, the shippers relying on the contract; but, suddenly and unexpectedly, a little fleet of colliers came up the Dardanelles, and brought down the price of coals. Petmez Oglou would no longer abide by the bargain he had made; he would not even pay the stipulated price for the coals which had been delivered; he would take no more coals from Mr. K——, unless he gave them at the price *now* current. When the contract and his own signature were shown to him, he laughed at both.—*Turkey and its Destiny*

INSTITUTION OF MECHANICAL ENGINEERS.

A general meeting of members of this institution was held on Wednesday, the 24th July, in their new rooms, Newhall-street, Birmingham, where accommodation for the public business, and for occasional visits of members, have been provided. As was remarked by Mr. M'Connell, the new arrangement must be of considerable advantage, especially to members resident in the locality, for all the engineering periodicals of the day are received, and already there is the nucleus of a mechanical and scientific library. On Wednesday the chair was occupied by Mr. M'Connell, in the absence of the president, Robert Stephenson, Esq., who was superintending the floating of the last tube of the Britannia Bridge.

Before the commencement of the regular business, the Chairman took occasion to announce, that to mark his sense of the importance of the institution, their worthy president had given a donation to its funds of 100*l.* He (Mr. M'Connell) might also inform the meeting, that the funds and prospects of the institution were never in a more flourishing position. They were now in a house of their own, with accommodation for the members, and where their able secretary would always be to afford information and assistance. They hoped soon to add to the usefulness of the institution by a good mechanical and engineering library for reference. Of course, the realisation of this hope would very much depend on the liberality of the members. He concluded by proposing a vote of thanks to Mr. Stephenson for his donation, which was carried by acclamation.—The first paper read was one by Mr. WILLIAM SMITH,

ON THE CONDENSATION OF STEAM IN THE ENGINES OF THE SOUTH STAFFORDSHIRE IRON DISTRICT, AND THE IMPROVEMENTS TO BE EFFECTED IN THEM.—It will be remembered that the paper was read at the January meeting in this year, and the discussion adjourned until the present meeting. In our report of the former [see *Mining Journal* of Feb. 3rd] we stated the substance of the paper; but, as the subject is of vital importance in that district, and generally so, we briefly refer to the practical results of the writer's carefully digested observations. Mr. Smith's object, then, was to show by a series of 48 indicator diagrams, the present working condition of some of the largest class of mill, forge, and blast-engines in South Staffordshire, especially with reference to their imperfect vacuum, and the consequent loss of power resulting therefrom. The paper was illustrated by a series of diagrams. The improvements by which Mr. Smith proposes to remedy the prevailing defect, are a proper proportion of valves and passages, a more efficient plan of condensation, and a more perfect mode of applying expansive action, by lifting each valve by a separate cam. The practical results of Mr. Smith's inquiries are—a loss to the owners of these 45 engines, from their defective construction and action, amounting to 18,610*l.* per annum, or 2*l.* 7*s.* 7*d.* per horse-power per annum. The total steam-power employed in the manufacture of iron in this district may be computed to be fully ten times the nominal power of these engines specified, consequently, the total loss to the proprietors from the causes described may be taken in round numbers at the enormous sum 180,000*l.* per annum, besides the inevitable loss resulting from the tear and wear of the boilers, caused by the extra quantity of fuel consumed.—Some conversation followed the reading of this paper, Mr. M'Connell, Mr. Slate, Mr. Cowper, Mr. Bowman, Mr. Thomas Thorneycroft, and others expressing their approval of the experiments and conclusions of Mr. Smith.—Mr. Slate remarked that the facts were very important and startling. In the present depressed state of the iron trade it became imperative to study economy, and here it was proved by facts that could not mislead, by diagrams which bore out the statements, that the enormous sum of 180,000*l.* a-year was more than thrown away. He recommended the fact to the attention of the ironmasters of the district.—Mr. Smith remarked that steam-engines were not treated like any other piece of machinery. If a chronometer refused to register correctly it was at once sent to be repaired. Other machines, if they did not do their work properly, must stop; but the poor old steam-engine, after 20 or 30 years' labour, has no such attention paid to it. An extra application of the coal-shovel, or peradventure a tinkering with a hammer, and on it goes. He was of opinion that all this must be changed; it would be found necessary, as a measure of economy and sound principle, for every possessor of an engine to maintain and renovate the constitution of that engine, as he would do any other piece of perishable machinery.—Mr. Cowper remarked on the great importance of an efficient distribution of the injection water, as pointed out in Mr. Smith's paper; and he described an improved injection valve, which he had adopted very successfully.—Mr. M'Connell considered that the institution was indebted to Mr. Smith for his valuable suggestions, and if so, how much more deeply indebted were those for whose benefit these researches were made? For the ironmasters of this district the subject was of vital importance. He recommended the facts to their serious attention, and trusted that Mr. Smith would persevere in his valuable inquiry.—A vote of thanks was passed to Mr. Smith, at the suggestion of the Chairman.

ON A BLOWING ENGINE WORKING AT HIGH VELOCITIES: BY MR. ARCHIBALD SLATE.—Mr. Slate proposes this as a substitute for the old blowing-engines for blast-furnaces, working with a slow action; large, cumbrous, and expensive, and imperfectly performing their work. The construction of the proposed engine is—two blow cylinders, 30 inches diameter, and 2-feet stroke, with their pistons fixed on the same piston-rods as the pistons of the steam-cylinders, which are connected to two cranks fixed at right angles to each other on the same shaft. The slide valves of the steam cylinders are worked by eccentrics on the cranked shaft, and the cranks at the outer end of the same shaft work the slide valves of the blowing cylinders. The arrangement of the blowing cylinder cannot be fully explained without the drawings. Mr. Slate estimates the direct saving from the adoption of his plan at between 65 and 70 per cent.; the price of a pair of the best ordinary blowing-engines, for three furnaces, being 3650*l.*, while in the proposed plan they would cost 1100*l.*, or if high pressure and condensing, 1350*l.*, including in each case the engine-house, but not the boilers.—Considerable discussion arose on this paper, more particularly in reference to a comparison between the fan blast and the mode proposed by Mr. Slate.—Mr. Slate said he had no intention to make any such comparison, but since the subject was introduced, he expressed his preference of the cylinder-blast to that of the fans, as he considered that the latter caused the lining of the furnace to burn away faster.—Mr. Cowper and Mr. Robinson were of opinion that the fan-blast was preferable for cupolas, and did not cause more repairs of the lining.—Mr. Smith remarked that the question started by the paper was, the superiority of Mr. Slate's blast-engine, working at a high velocity, over the ponderous engine at present in use for blast-furnaces, to which the fan-blast was not applicable.—The Chairman conveyed the thanks of the meeting to Mr. Slate, and the further discussion was reserved until the production of a promised supplementary paper on the important subject.

ON A NEW RECIPROCATING ENGINE: BY J. A. SHIPTON, MANCHESTER.—The subject of this paper was an engine of the reciprocating class, differing from the ordinary engine in the means adopted for obtaining the revolving motion direct out of the rectilinear; the principle through which power is obtained being the same as the ordinary reciprocating engine—viz., a piston acted upon by steam, being propelled in a rectilinear direction, but a revolving motion being combined with it. The steam chamber or cylinder is the same as in ordinary rotary engines, in which an excentric piston, turned true on the periphery, revolves. This piston is keyed on to a shaft carried on rods vibrating from the crank shaft pedestal. In each end of the piston are turned conical seatings, into which are fitted rings of metal, cut open on one side, and having a lap joint, to prevent the escape of steam. This is a very imperfect description of the engine, the absence of models and drawings rendering it necessarily so. The inventor stated that he had had an engine constructed on this plan at work for seven months in Wolverhampton. He had a second engine working at Manchester, alongside of an ordinary high-pressure engine, and had found, by working the two engines alternately, that there was a saving of 10½ per cent. of the fuel with his engine, the work done and the boilers used being the same in each case.—Mr. Robinson remarked that the principle was precisely the same as one projected many years ago, but never carried out. He did not doubt that a good engine might be made of it. Some observations were made as to the comparative power of this engine, but no sufficient data existing, it was recommended that the inventor should test the capabilities of his engine accurately, by a dynamometer and indicator, and communicate the results.—A vote of thanks was given to Mr. Shipton, who promised the result of a more complete trial.

ON THE FORM OF SHAFTS AND AXLES: BY MR. THOMAS THORNEYCROFT.—This paper consisted of an exposition of what the writer considered the true theory of the form of shafts, &c., whereby the elements of self-destruction, which more or less existed in all matter, were reduced to their minimum. This principle, applied to railway axles, had been practically tested, and the writer illustrated his remarks with drawings of a series of experiments made upon axles of different forms, and by the axles themselves on which the experiments were made. The conclusions at which the writer arrived were, that neither shafts nor railway axles ought to be reduced in the middle, but rather, if there is to be a departure from the parallel form, they should be made thickest in the middle, so as to avoid vibration or bending.—The discussion on this paper was adjourned till next meeeting.—*Birmingham Journal.*

BRITANNIA METAL JUGS.—We have had shown to us a sample of a rather novel application of Britannia metal in the manufacture of domestic utensils. It was a large water-jug, an elegant well-shaped pattern, with German silver mountings, and presenting a very handsome appearance. Metallic jugs of small capacity are not uncommon, but we understand that none of this size, or approaching to it, have previously been made in Sheffield. If they can be produced moderately cheap, as we understand they can, they will in all likelihood displace to a considerable extent the china jug. This jug has a richer appearance, and possesses the important advantage of less liability to be broken. Used for hot liquids, too, it has a decided superiority, independent of having a close-fitting lid. Due pains being taken to make this description of jug well known in the country, there is a fair chance of its becoming a not unimportant article in one department of our staple industry.—*Sheffield Times.*

Original Correspondence.

ON GRANTING LICENSES TO WORK MINES.

SIR,—Seeing in your valuable columns of late some remarks on the impropriety of landowners refusing to grant leases for mining, I now beg to call their attention to this subject, by remarking that it is for the public interest, as well as the lords', that setts should be granted where there is a prospect of mines becoming remunerative. Nature has so placed us, that one man is to live by the works of another: if all men were to act in opposition to each other, and contrary to this law, nothing could go on and prosper. Most men follow some religious creed, which has a law founded on the principles of justice, and I venture to ask if there is any branch of our native industry so much opposed as mining generally, and by those whom we may fairly term well-educated men, and the very men who have a chance of reaping the greatest benefit by it. Do these men live up to the law of the creed they follow? Are they guided by the law of live and let live? I think not: a large portion of them oppose a commonwealth cause, although they cannot go one day without the materials which this class produce. A man wishing to have a grant of a piece of land, where there is a prospect of finding a productive mine, first applies to the steward for a license, to which the general answer is, "The proprietor dislikes mining, and is not inclined to grant it." If, perchance, he should be more civil than the general average of stewards, he may say, "I will speak to him on the subject," and, after some half-a-dozen journeys, you may probably get an answer, that the lord does not like to have his game disturbed; should that point be got over, you may have a letter of license to try a few pits, subject to high dues, with strong restrictions to fill it all in, and make good the land, if nothing is found—the latter clause all very good.

I would next point out a case of a person applying for an iron grant on a barren hill, not worth a shilling per acre. After some dozen journeys, a license was obtained from a steward on very restrictive terms. The party commenced operations, and in a few days discovered a good lode of iron ore, when the steward quickly sent him a bill of 3*l.* for the unstamped letter of license; the party not relishing the bill, asked what the charge would be for a lease? the answer returned was, "It will be a mere trifle; we will prepare and hand you the draft;" which soon made its appearance, and was said to be very short, only 108 folios; and, after the first few usual forms, it commenced with restricting the parties from employing any person but those living in the two parishes the land was in, and the party was to pay them such wages as the landlord thought proper, and in no case to pay less wages than was paid to ironminers in Wales; a separate agent was to be employed for every shaft or pit, to watch his interest, and the party working the land to pay them at all times; when ther were 50 tons of ore on the surface it should be weighed, and the dues paid These are only a few of the outlines: the party at once refused to take such a lease, when a bill was quickly forwarded for 13*l.* more for this draft, and all for opening four or five pits for iron ore, worth about 4*s.* a ton on the spot. It is these things that prevent many productive mines from being opened. I admit that all parties are not met in this way; but it is too often the case, that parties are put to such extra trouble and expense to obtain a fair and eligible lease, as to dishearten the applicant, and cause him to abandon it, and the mine often remains unworked for years. I contend that it would be for the interest of the landowner and the public, if a more concise or abridged lease was got up as a general form for all mines, only varying as to dues, and a few minor points, with a fixed price. It would be far more beneficial to the landowner, adventurer, and public generally, if applicants were met in a more liberal way. Many landlords object to grant setts without a company is first formed. Let us suppose a man knew of a promising lode; what would be the use of his going into the market to get parties to join him to carry it out, without first obtaining the grant? Who would countenance the man? Most lords also object to grants to labouring men, which I consider is treating them very unfairly. It is the poor man, in nine cases out of ten, who first discovers the lodes, but of which he cannot take advantage, he being a man of straw. Will any landlord show the public what damage he could sustain, if he granted these men a letter of license to open pits and work for one year, and then to grant him a regular lease, if a responsible man or a company was produced? if they failed to do so, his year's license terminated, it is again in the lord's hands; but the reply is, the poor man will open a great many pits, and leave them unfilled. This would not often happen. Admitting it did, a sovereign will pay for filling in as many pits as cost the poor man 5*l.* to dig them; in that case this man has spent 5*l.* to the lord's one, in developing the back of a lode that may some day remunerate the owner with thousands, and the poor man never recovering a shilling for his labour. Should he discover a lode worth notice, parties will quickly join him, and he would get remunerated for his trouble. There are hundreds of lodes known to labouring men that would be opened and tried if the lords were more liberal, and granted to any labouring man that applied. Was it my case, I should prefer granting to these men, as they would, from their practical knowledge, select the most promising lode to risk their own labour on.—N. ENNOR: *Wivelscombe, August 5.*

CARN BREA MINING COMPANY.

SIR,—When you stated "that the sett of South Carn Brea originated, you believed, with the Carn Brea Company, under whose management it is to be conducted," you inadvertently fell into an error—that statement is not literally, although substantially, correct. The lease of South Carn Brea was granted on most favourable terms by Lady Basset to Joseph Lyle, Esq., of Bonython, who is also the lessee of the Carn Brea Mines, North Basset, Wheal Grenville, and other important mines in that locality, the whole of which have been brought into profitable working under his auspices, and mainly by his instrumentality. The sett, therefore, "originated" not with the Carn Brea Company, who are necessarily a fluctuating body, but with the founder of that company himself. The latter part of your statement is more accurate than the former, for the *management* of South Carn Brea is in the hands of Mr. Lyle himself, the largest shareholder, who is also the actual manager or superintendent of the Carn Brea Mines. (See published report of Carn Brea for the past year.) I do not understand who assume to be "the directors of the Carn Brea Mines;" no such personages are recognised in mines conducted, as this is, on the Cost-book System. Your statement, after all, was not so very inaccurate, and was merely given as your *belief*; however, it has served to bring out the facts.

London, August 8. A SHAREHOLDER IN SOUTH CARN BREA.

THE CARN BREA GROUP OF MINES.

SIR,—I noticed in your Journal of Saturday last an article referring to the Carn Brea group of mines, wherein the writer attempts to draw a parallel between the extraordinary riches of the Great Devon Consols and what is, according to him, to result from the working of the South Carn Brea setts. The object is palpable enough; that he will so easily gull the public is not quite so obvious; but he proves to demonstration that he knows nothing of mineral veins nor mining operations. That Carn Brea has been, and still is, a rich and productive mine is not to be denied; but may I ask how does the comparison hold between these mines and the Great Devon Consols—the first-mentioned being in a granite, whilst the latter is in a slate or killas strata, the mines being about 70 miles apart from each other? But the writer's knowledge of the subject upon which he writes amuses me vastly. In reference to the Great Devon Consols, he says, "The lode lay so deep that it required immense steam-power to keep the water from some 100 fathoms or more in depth," whereas there is not a word of truth in the statement. The ore backed up to within 10 fathoms of the surface, and was discovered simply by the application of a small water-power. Cornish geese are proverbial for their propensity to gobble up the tin; and he would be deemed in the mining districts a very silly goose who did not understand that the backs of mineral veins or lodes are always traceable directly under the alluvial soil. But may I ask, what is the extent in length and width of this sett of South Carn Brea? The name implies that it runs parallel with the Carn Brea mines. From my perfect knowledge of the locality, I should say there might be a strip of land left between Carn Brea which reaches to the brow of the hill on the one hand, and North and West Wheal Basset, situate on the southern slope of the Carn Brea hill, on the other, sufficiently capacious for the site of an engine-house; but, as Mrs. Glasse very quaintly remarks, "First catch your hare," &c. So, I say, first let the writer find a lode, before talking of erecting patent steam-engines; he would find ordinary ones rather too expensive for such an undertaking. But, seriously, I am perfectly acquainted with the whole locality, and am not aware of there being the slightest trace of a lode in the piece of ground between the Carn Brea Mine and North and West Basset, even if there be room for one of ordinary dimensions. It by no means follows, because the Carn Brea mines are rich on one side, and the North Wheal Basset mine is said to be rich on the other, that the narrow slip of intermediate and parallel ground should contain a particle of metallic ore. And pray, where is the writer to find the mass of ore which is to pay for all the plant—prodigious!! who put it there? as he describes it at the 75 fathom level adit. The attempt, in all likelihood, would be—

> "As vain as those who, when the moon,
> Bright in a crystal river shone,
> Threw casting nets, as subtlely at her,
> To catch and pull her out of the water."

Redruth, July 29. AN OBSERVER.

TREGEAR CONSOLS—ST. KEW, CORNWALL.

SIR,—Knowing your readiness at all times to furnish the best information obtainable for the benefit of mining adventurers, *as a shareholder of the above mine*, may I be permitted to inquire if a general meeting *has ever been held* for the exhibition of accounts, and for the purpose of showing how the funds have been applied? The rules show that a monthly meeting of shareholders shall be held, for the purpose of inspecting accounts, &c., *but I have looked in vain for such meeting*; nor can I obtain any satisfactory account what is doing on the mine. Now, Sir, mining generally (as a valuable source of investment, when judiciously and honourably prosecuted) is seriously injured by *such practices*, and many a valuable mine has been stepped for want of confidence in its management. Adventurers are not all practical men, nor have they, at all times, the means, or opportunities, of seeing the concern in which they have made their investments; they, therefore, are compelled to trust to the good faith of those to whose management it is confided. Surely, it cannot be to the interest of any mining company to withhold such statement of accounts at the periods mentioned in their rules; and I cannot conceal that my suspicion is awakened that all things are not quite right *when accounts are kept from the light.*—A CONSTANT SUBSCRIBER: *London, July 31.*

THE AUSTRALIAN MINING COMPANY.

SIR,—In the report of the directors read at the meeting of the 29th, they say—"Having waited to see if the progress of colonial smelting would open a new channel for their being realised on the spot, they have finally determined on having all the poorer ores washed and dressed to a higher per centage for shipment home." In this report we are not told the progress that the colony has made in smelting, and it certainly would have been desirable if some further information on the subject had been elicited. From the accounts which have from time to time appeared in the *Mining Journal*, it would seem the smelting works in the neighbourhood of Adelaide had progressed in a satisfactory and rapid manner, while those at Burra Burra were returning large profits. These last mines, I believe, lay about 80 miles from Adelaide, the Tungkillo property 34 miles. The freight on the ores to London is 3 guineas per ton, with 5 per cent. primage, and it must then be re-shipped to Swansea before it can be realised, entailing double waste, double insurance, and all the concomitant charges. In order to dress the ores to a per centage sufficient to pay all these charges, great quantities of a lower value must be thrown away, or put to pile as halvans, to be stamped and buddled at some future period. We are told that fire-clay, and all the materials for building, are in the colony, and surely it would be better to erect small smelting works for the reduction of the ores, both of a higher and lower per centage, on the spot, than enhance their value to benefit the Welsh smelters. A smelting works, sufficient to smelt the ores raised at the Tungkillo Mines, might be erected for 3000*l.* or 3500*l.*, which could be increased in the same ratio as the produce of the mines. I am aware that, while so much has been expended in the purchase and development of the property, and no dividend as yet received, it may appear to some parties unreasonable to ask the shareholders to make further advances, and whatever advantages were held out to them would, no doubt, be regarded with considerable distrust, and looked upon with a suspicious eye.

The freight of coals from Newcastle (New South Wales) cannot be near so much as the freight of the ores from South Australia to England; and, by a small outlay, the shareholders would not only effect a great saving in freight and all charges, but receive the double profit of smelter and miner. It will, I dare say, be thought premature at this time to broach the subject, but I certainly think, if the company do not take up the question themselves, it would be a profitable speculation for competent individuals to erect small smelting works, about the size of those on the Elbe, for the purpose of purchasing ores from the mines. They could afford to give as high prices as the British smelter, the miners would pay no other charges than cartage, and at the same time, a quick outlet being raised for the produce would greatly stimulate mineral industry in the colony. As the ores have first to be realised before the money can be obtained, but few private individuals are enabled to be a twelvemonth in advance of their capital; consequently, none but companies can carry on these works, and that at a lower rate of profit than otherwise would be the case. Although occasionally some brilliant speculations occur in mining, both at home and abroad, these are the exceptions; very many are only steady-going concerns, where nothing can be afforded to be thrown away, and it is to their advantage this would especially apply. The proximity of the colony to the Indian market would give the smelter an easy facility of disposing of his produce, and an early return for his investment. Should the company not deem this suggestion worthy of notice, I trust that it may be considered by those interested in the mineral wealth of South Australia, and the well-wishers to the colony. A SHAREHOLDER.

PELL *v.* COUCH.—At the Warwick Assizes, on Tuesday, an action was tried on a promissory note for 300*l.* by the endorsee against the endorser, and on a bill of exchange for 200*l.* by the endorsee against the acceptor. The defendant had pleaded several pleas, but those upon which the questions in the case turned were a denial of the endorsement of the note, and a denial of the acceptance of the bill.—The plaintiff is a farmer and grazier near Market Harborough, and the defendant had been engaged with the plaintiff's son in mining speculations in Wales. The one had been manager and the other purser of a mining company, called the Abergwessin Silver-Lead Mining Company, but the plaintiff's son ceased to be purser in Dec., 1847, and was now out of the country; and the defendant was dismissed in Sept., 1849. The maker of the promissory note was a Mr. Hungerford, of Dingley-park, near Market Harborough, who took 50 shares in the company in Sept., 1846, and paid for them by the note in question, which he dishonoured, and which the plaintiff had cashed. Messrs. Couch and Pell were the payees of that note, and it seemed clear that whether the endorsement was written by Couch, the defendant, or his partner in the mining speculations, there was sufficient evidence of authority to bind the defendant. The bill of exchange was dated in June, 1847, and was said to have been given to the plaintiff to secure further advances made by him to his son and the defendant, but the defendant denied that he had accepted that bill at all. Two witnesses expressed their belief that it was his handwriting, and four that it was not; but there were other documents in evidence in the cause, which were admitted to have been written by the defendant.—The learned Judge told the jury to look at those documents, and endeavour to satisfy themselves on the question of handwriting.—The jury eventually found a verdict for the plaintiff—damages, 575*l.*

THE FLINTSHIRE MINERS.—Our readers are aware, from former notices, of the intractable state of the miners employed at the Milwr, Halkin, and Talargoch Mines, and their attempt to enforce a system of six hours working per day, instead of eight hours—the time employed in all the Cornish and other mines in England. We have before noticed several serious outbreaks; but the 30th July appears to have been fixed upon by the Halkin and Talargoch men to enforce it on the Milwr Mining Company, who had succeeded in keeping a sufficient number of men employed, and who seemed contented with the working hours. On the day mentioned, they collected to the number of 500, armed with sticks, and proceeded to the house of Capt. Francis, the company's agent, who, having been cautioned of the riotous intention, had left home to escape their threatened vengeance. They behaved in the most riotous manner, declared they would murder him, and one man carried a sack for the purpose of putting him in and burying him alive; and it is said a hole was actually dug for the purpose. They broke open the door, calling upon his daughter, Miss Jane Francis, to reveal his hiding place, and it was in vain she assured them her father was not in the house. They remained ransacking the house for two hours, and some of them drank a quantity of wine and spirits. Some would not touch it, for fear of its being poisoned. While the mob was in the house, Mr. Lightoller, a shareholder, went and tried to gain admittance; but he was surrounded, and made to sign a paper that six hours were enough for a day's work. A few police officers were of little use against such a mob, who seemed most inveterate against their employers. Several gentlemen, therefore, waited on the clerk of the peace at Mold, and informations were laid against the ringleaders—two of whom, W. Jones and Ishmael Blackwell, were taken by stratagem; but, the fact having got wind, the rioters assembled and started to Mold to rescue their companions, who, however, were discharged, as no one dared to give evidence against them. As there was no likelihood of an abatement of the outrage, a messenger was dispatched to Chester for the military; and, on Monday evening, a detachment of the 38th Foot arrived, and their presence has had the desired effect, as the district is now comparatively quiet.—At the Flintshire Assizes, on Friday, true bills were found against William Lloyd, Morgan David, Ishmael Blackwell, Edward Jones, John Edwards, and Francis Downing, for riot and conspiracy. Lloyd and David, who were the only two in custody, pleaded, and were allowed to traverse till the next assizes; and bench warrants for the apprehension of the remainder of the defendants were moved for and obtained. Lloyd and David were admitted to bail.

COPPER LODE AT PLYMOUTH.—In digging for the foundations of a new street in a field to the north of Plymouth, near the new Prison, it is said, that strong indications have been discovered of the presence of a lode of copper ore, and that, in consequence, competent persons have been engaged, carefully to explore the ground. The lode, it is supposed, will trend towards the westward, crossing the Tavistock turnpike at North Hill, in which case it will fall into some land recently purchased by the Rev. John Hatchard, the Vicar of St. Andrew, who will, no doubt, not let so valuable a metal lie useless on his property.—*West of England Conservative.*

The *Banner of Ulster* mentions the arrival of a quantity of coals from the newly-worked Irish Colliery, of Murlaugh Bay.

IMPORTANT DISCOVERY OF IRON ORE ON THE SHORES OF LAKE SUPERIOR.—The *Pittsburgh American* describes a sample of iron ore recently received from Lake Superior:—"It is apparently a pure oxide of iron, and said to exist in immense bodies on the lake shore abounding in timber. It is from 65 to 70 per cent. pure iron. It is worked in refineries or bloomeries as pig metal, and the blooms, it is said by those interested, can be delivered in Pittsburgh at $40 per ton. Those which been brought are rough and uncouthly made, but the iron is of No. 1 quality. The workmen employed convert the ore into blooms for $8 per ton, the materials being furnished them. If this be so, and our account be from a reliable source, there is another revolution promised in the iron business of this country and the world."

LONDON AND NORTH-WESTERN RAILWAY.—This company are carrying out some extensive experiments in the way of a reduction of fares, with the view of testing the productiveness of the local traffic. Hitherto, the price of day tickets, for certain distances, has been two-thirds less than two fares, a further reduction upon which, to the extent of one-sixth, has been made.

FOREIGN INTELLIGENCE.

NEW YORK, JULY 23.—Advices from California had reached here to the 18th June, being 18 days later than the previous dates. Another awful fire had occurred at San Francisco; the destruction is estimated at $5,000,000, considerable part being in goods consigned, the loss of which would fall on the shippers, there being no means of insuring against fire there. A large trade was doing with the Australian colonies, and a great many passengers had arrived from thence. Some new discoveries of gold had been made in Oregon, and were exciting attention; it was thought probable that some emigration would be directed there. The accounts from the mines give assurance that there will be a greater quantity of gold dug this summer than before.

The *San Francisco Herald* of June 13, says:—"We scarcely know which valley, the San Joaquin or the Sacramento, has sent out the richest specimens; but the gold comes from both regions in sufficient quantities to prove that there was but little extravagance in the assertion that the ore is inexhaustible. It has been found, too, as far north as Oregon, and as far south as the mountains near Los Angelos. There appears to be a ridge of gold-bearing quartz running the whole length of the country, almost north and south. The ore has been found richer in the mountains of Los Angelos than even in the mines of Mariposa. We have seen large masses from both localities. As found in the former place, it will require the employment of science and machinery—the one to direct operations, the other for grinding the rock; and with these two agents engaged, it will afford, from the immense quantity that exists, sufficient employment and compensation to three-fourths at least of all the superfluous labour in the United States." This flattering account must, however, be received with some allowance for the sanguine temperament of new settlers.

The *Sacramento Transcript*, refering to some new discoveries, says—"The mines alluded to are situated in a range of low hills, lying in the valley of San Jose, between the Contra Costa and coast ranges of mountains, and four or five miles above the Pueblo. The gold is found in the form of ore, one species being clearly micaceous sandstone; the other, a blue compact stone, resembling talcose slate, without the slaty texture. Several specimens have been assayed, the highest assay yielding 87½ cents to the pound; the lowest, about 25 cents. So that it may be a safe computation at over 20 cents to every pound of ore for the whole mine. What is a little singular in the case, the people at San Jose think it is a silver mine, while there is not enough of this metal in the ore for the necessities of the assay. A company from the city have purchased the mining right of the whole range (consisting of several leagues) upon which the mine is located, and are about to commence extensive operations with appropriate machinery."

And in another instance the *Pacific News* states as follows:—"Several gentlemen, engaged in mining upon one of the northern rivers, in their explorations in the adjacent mountains during the past winter, came upon a vein of quartz, where the pure ore was observed in threads and spangles, beautiful to look upon. An examination took place, specimens taken from various portions of the rock, and such rude tests as were at hand applied with the most satisfactory and even astonishing results. The vein is about 30 ft. wide, and in some portions so rich as to produce a dollar to an ounce of rock! A piece was knocked off weighing 14 lbs., and submitted to the action of heat in a blacksmith's forge, when the amount of $32 was *smelted from the rock!* Not half of what it contained could be got out in such a way. Other specimens have yielded from $1 to $2 to 1 lb. of the rock, and the quantity of it is represented as literally inexhaustible. We shall have some specimens from these mines in a week or two, when we shall probably speak of it again. The mother mines of California are yet to be discovered, of which the gold in the rivers and ravines are but the disintegrated particles."

With reference to the reports of new and rich mines in Oregon, the *Oregon Spectator* says—"The opinion is gaining strength daily, that one of the richest mines on the shores of the Pacific has been discovered in the Spokan country, some 400 miles from Oregon city, and up the Columbia. We are assured by Capt. N. Crosby, who saw it, that the sand which was brought from the Spokan was, in its bulk, about one-quarter gold. The country in which this gold has been found is one of the healthiest in the world; and if the mines should be found to extend over a large region of that country, it will soon be teeming with an overflowing population, attracted thither by the double allurement of gold and health."

Grand discoveries are reported in the Scorpion Gulch, and on Feather River.

RICH DISCOVERY OF VEIN GOLD.—There is no doubt on our minds that the mineral wealth of California will be found incalculably greater than even the most sanguine have hitherto imagined. Every day's discovery goes to confirm this opinion; and facts within our knowledge warrant us in saying, that the present season will bring to light the most startling developments in vein or quartz mining. If in the low, or secondary hills, a few hundred feet in height only in the San Jose valley, rich mines of gold ore are found, of which we spoke yesterday, what may not be looked for in the explorations among the mountain ranges on either side? And if such results are found in the coast mountains, where no one expected much gold to exist, what will not the foot slopes of the Sierra Nevada disclose to the searching enterprise that is now actively employed amidst their gorges, and on the borders of their streams? We are led to these remarks from certain remarkable discoveries of quartz gold which have lately come to our knowledge from an unquestionable source. Several gentlemen, engaged in mining upon one of the northern rivers, in their explorations in the adjacent mountains during the past winter, came upon a vein of quartz, where the pure ore was observed in threads and spangles, beautiful to look upon. An examination took place, specimens taken from various parts of the rock, and such rude tests as were at hand applied, with the most satisfactory and even astonishing results. The vein is about 30 feet wide, and in some portions so rich as to produce a dollar to an ounce of rock! A piece was knocked off weighing 14 lbs., and submitted to the action of the heat in a blacksmith's forge, when the amount of $32 was smelted from the rock. Not half of what it contained could be got out in such a way. Other specimens have yielded from $1 to $2 to a pound of the rock, and the quantity of it is represented as literally inexhaustible. We shall have some specimens from these mines in a week or two, when we shall probably speak of it again. The mother mines of California are yet to be discovered, of which the gold in the rivers and ravines are but the disintegrated particles.—*Pacific News*, June 12.

The *Crescent City* has arrived from Chagres, with mails from San Francisco to the 15th June. Her passengers have $180,000 in gold dust, and there is a small amount on consignment.

The *Columbus* arrived at Panama on the 6th July, having left San Francisco on the 18th June. She brought 150 passengers and $130,000 in gold dust, on freight, and the mails. She was 17½ days from port to port—the quickest passage on record. The discovery of large gold deposits in Oregon has awakened considerable attention. The accounts are very authentic, and we think may probably have an influence to direct part of the current of emigration which is now on the plains.

The whole number of vessels which have sailed from the Atlantic ports for those of California, since the recent discovery of gold in that region, is 1257. Among them are included 30 steamers, The aggregate tonnage of these vessels is very nearly 400,000 tons, and had a canal existed, not one of them would have doubled Cape Horn.

We learn from the *Lake Superior Journal*, that the copper operations are progressing successfully: 26 tons of native copper in masses, some weighing over 4000 lbs., from the Minnesota Mine, had just reached the Sault. Larger masses are ready to ship; and the Minnesota bids fair soon to rival the noted Cliff Mine. The iron mountain region of Lake Superior is also attracting attention. The *Journal*, after stating that the Jackson Iron Company are about greatly to enlarge their works, further states that "the locality embraces a large portion of the Iron Mountain, and contains a sufficient quantity to supply the whole country for centuries. It is piled up in irregular stratified masses, easily split or broken up with a crow-bar and sledge-hammer; and one may break and throw together 50 tons of this ore in a day. To make bar-iron from this ore is a cheap and simple process, and the day is not far distant when the markets around the whole chain of lakes will be supplied with their best article of iron from the Iron Mountain of Lake Superior. A new iron company is to be immediately organised by Pittsburghers. John Haya, Esq., of Pittsburgh, has entered several tracts of land in the Iron Mountain region, and is on his way home for a large force of men and supplies."

It appears, by the last accounts from the United States, that it is no longer permitted for British and other foreign steamers to import and land coal for their own use on the return voyage. The representations of the merchants of Philadelphia, as to the unfavourable influence the system exerted over their own coal interests, has called forth the following circular from Mr. Meredith, the Secretary of the United States Treasury:—"In reply to an inquiry made at this department by a citizen of Philadelphia, I have to state that foreign coal intended for consumption in sea steamers, and placed in bonded warehouses under the provisions of the warehousing law, can be withdrawn from warehouse without payment of duties, only to be exported and landed abroad; and its consumption on board the vessel is not regarded as a landing abroad within the meaning of the law. There is another provision of the law, however, on this subject, to which it may be well to refer. By an Act of Congress of the 7th July, 1838, it is declared that it shall be lawful for the captain or master of any steam-boat, or vessel, propelled by steam, arriving at any port in the United States, to retain all the coal such boat, or vessel, may have on board at the time of her arrival; and that he may proceed with the said coal to a foreign port without being required to land the same in the United States, or to pay any duty thereon."

PLATINUM OF CALIFORNIA.—In a letter from J. E. Teschemacher, we are informed that he has detected a proportion of platinum among the grain gold of California, that will render it an important object of search in that region. In an ounce of the fine grains, he found about 50 granules, which proved to be this metal. He observes that the proportion obtained is about as large as from the South American mines.

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

THOMAS RICHARDSON, Newcastle-upon-Tyne, chemist: For improvements in the manufacture of Epsom and other magnesian salts; also alum and sulphate of ammonia.

1. Mr. Richardson takes rough Epsom, or an impure solution of sulphate of magnesia, and mixes with it a precipitating agent—by preference magnesia. The mixture is well agitated and heated; it is then allowed to stand, in order that the impurities may be precipitated, and decanted off. The pure solution is next evaporated, until it concentrates to from 50° to 60° Twaddle's hydrometer, and is subsequently placed on one side to crystallise. Stroontia, baryta, or lime may be used, instead of magnesia, as a precipitating agent, but not with the same advantage, as it would combine with the ammonia in the solution. When either of the sulphurets before enumerated is to be employed as the precipitating agent, it must be used in solution. Instead of using the substances (rough Epsom and magnesia) in solutions, they may be ground up together in a moist state, and the Epsom subsequently dissolved out. Carbonate of magnesia is obtained by calcining the magnesia employed in the purifying process. To produce a double salt of magnesia and ammonia, gas water is mixed with a pure or impure solution of sulphate of magnesia, and boiled until rendered neutral. The mixture is allowed to crystallise, and the salt is to be used as a manure. Or sulphate of magnesia, in a damp state, may be subjected to a current of ammoniacal gas, produced by the distillation of gas water, guano, or other ammonia-giving substance. If required, the gas water is to be neutralised by the addition of sulphuric acid.—2. The improvements in the manufacture of alum consists in the employment of (say) eight pits, the first and last of which communicate with one another, and with the intermediate ones, which also communicate with each other by means of a vertical pipe that rises inside one of them, and is fitted with a tap at top, while its lower end is curved, and opens into the lower part of the next pit, and so on throughout the series. Above the mouths of the pits there is a horizontal pipe, communicating with the water reservoir, which is provided with a number of cocks, one for each pit. When the pits are charged with shale, &c., water is admitted into the last, where it remains for some time, till the substance is exhausted. Fresh water is admitted, and liquor then flows into the first, where it remains some time, to effect a like purpose. Afterwards fresh water is admitted, to cause the liquor to flow into the second pit in the series, and so on, until it has the required degree of strength: it is then drawn off by a cock at the bottom. When the contents of the pits are exhausted, they are successively replaced by a fresh supply.—3. The patentee proposes to manufacture sulphate of ammonia by employing the double salts produced according to the method described under the first head of the specification, and subliming it in the usual way.

Claims.—1. The employment of magnesia, strontia, baryta, or lime, or of the sulphurets of strontium, barium, sodium, magnesium, ammonium, or calcium, in the manufacture of Epsom or other magnesian salts.—2. The improvements in manufacturing alum.—3. The mode of manufacturing sulphate of ammonia.

CHARLES ATHERTON, Member of the Institution of Civil Engineers, London: For an improved apparatus or machinery for regulating the admission of steam to the cylinders of steam-engines. The patentee describes and claims—1. A peculiar construction and arrangement of eccentric wheel or crank motion, in order that the throw of the crank may be varied as required. For this purpose, the central portion of the eccentric wheel is cut away and fitted at top and bottom, on the inside, with two screw rods, which carry a plate, through the centre of which passes the centre of motion. By turning the screw rods so as to shift the centre of the plate further from or nearer to the centre of the eccentric wheel, the throw of the crank will be increased or diminished accordingly.—2. Constructing the slide valve of a number of cylindrical or annular surfaces, which are maintained at a certain distance apart from each other. The steam issues through the spaces between the rings, and when they are brought opposite to corresponding spaces in the casing, it passes into the steam cylinder. When the cylindrical surfaces are brought opposite to the openings in the casing, the supply of steam will be cut off.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

J. Shaw, of Paddock, near Huddersfield, York, cloth finisher, for improvements in constructing and working certain parts of railways.

J. Gwynne, of Lansdowne Lodge, Notting-hill, merchant, for improvements in obtaining motive power, and in applying the same to giving motion to machinery.

F. Kane, of Berner's-mews, Middlesex, chair maker, for improvements in reclining chairs, in castors for chairs and other articles of furniture, and improvements in presses.

W. Crosskill, of Beverley, York, civil engineer, for improvements in mills for grinding, splitting, pulverising, and crushing grain, bones, bark, ore, and other hard substances, and for grinding paint and other soft substances, and for shelling or removing the skin from rice and other grain, and in machinery for giving rotary motion to mills, thrashing machines, and any other machines requiring rotary motion to be communicated by any horse or other animal.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

J. Sanders, Birmingham, set of dies for making pressed hinges.

W. Palmer, Sutton-street, Clerkenwell, candle-lamp.

J. Goode, jun., Birmingham, swivel.

W. Palmer, Brighton, sculptor's, statuary's, and modeller's revolving table.

J. Martin, Killyleagh Mills, Down, Ireland, an arrangement of steam and water pipes to be applied in spinning flax, tow, and other fibrous substances.

R. Davies, Globe-yard, South Molton-street, a pipe mount.

G. Cart, and Sons, Union-street, Southwark, spring folding collegian cap.

J. Welch, and J. Margetson, Cheapside, folding trencher cap.—*Mechanics' Magazine.*

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WHEAL HAMLYN (copper), in the parish of Bridestow, Devon.—It is really worth while for any mineralogist or mining agent to pay this mine a visit; I should think it is the largest copper lode ever opened in the kingdom (about 30 ft. wide), composed of malleable pure native copper, greens, sugar spar, soft gossan, prian, mundic, &c., altogether as fine a lode as can be seen. At present they are sinking a shaft in the middle of this great lode, which is looking much better at the bottom than near the surface; the shaft is now about 10 fms. deep. An adit has been driven more than a hundred fms., which will come into the shaft about 17 fms. deep; the lode is not yet cut in the adit, but a large stream of water is flowing from the present end. Some droppers, or feeders, have been passed through in the adit, carrying beautiful yellow copper ore. They have a powerful water-wheel, and a fine stream of water for working any machinery. About a quarter of a mile west of these workings the lode is seen entering the foot of a very high hill, or mountain, where they have now also commenced operations, and no doubt appears to exist but success will follow their labours. This great champion lode can be traced all the length of the sett, which is a mile-and-a-half long, taking in Great Close, Burley Wood, Water Gates, Coombow, and Coombow Downs. The purser, Mr. John Ham, of Halwill, near Bridestow, or Capt. J. Phillips, of Bridestow, will always feel a pleasure to show any respectable party through the works.

WHEAL ARTHUR PATRICK.—This mine is situate about eight miles north-east of Bristol, in the parishes of Olveston and Alveston, in the county of Gloucester, the sett comprising about 1300 acres; it contains four east and west lodes, and three north and south, all producing silver-lead ores, which by assay has produced 85 per cent. of lead, and about 35 ozs. of silver to the ton of lead, and are supposed to be continuations of the lodes of the Itchington Hill Mine, which we noticed in the *Mining Journal* of July 13. Mr. W. H. Smith, of London, and Mr. Moyle, of Bristol, have inspected the ground, and in their reports they express their conviction that large quantities of rich ores will be obtained in depth. The mine has been divided into 2000 shares of 3*l.* each, making a capital of 6000*l.* of which 300 shares are reserved to the proprietors, considered as having paid 5*l.* per share. They also receive 600*l.* in cash, leaving 4500*l.* as available capital, which is considered fully ample to bring the mine into a profitable state.

WHEAL TRENANCE, NEAR MULLION.—Some months ago we noticed that the prospects in this adventure were of a very encouraging nature, since which the spirited adventurers have sunk to a depth of 40 fms. The lode has continued in depth to grow into grey ore, and it was the opinion of eminent geologists that, after the serpentine had been cut through, a regular undisturbed lode of copper ore would be found. We may now state that in sinking on the lode in the 41 fm. level, the killas is reached, and in the lode there is a great deal of mundic, steatite, and portions of iron. The serpentine is gradually wearing out, and it is now the opinion of those experienced in mining operations, that before another 10 fms. are sunk, the workmen will be entirely out of the serpentine; in fact, the present indications are extremely good for the present depth. Mr. Dalton, the manager of the Wheal Trenance Mines, has taken a great number of shares, with Captain Hensley, of Marazion, who is now prosecuting a mine adjoining the above sett.

PONT PEAN MINE, BRETAGNE, FRANCE.—We learn from the *Conciliator*, a journal of Bretagne, that Mr. Percival Johnson has been to Rennes, on a visit to Mr. J. Hunt, the *concessionare* of the Pont Pean Mine, and has most successfully introduced a washing machine, recently invented by him for operating on the debris, of which there are immense quantities in this mine. Mr. Johnson has expressed his approval of the plans and projects contemplated by Mr. Hunt for the future working of the mine, and an opinion is expressed in the district that the high reputation Mr. Johnson has acquired as a miner and metallurgical chemist, in eminently practical mining countries, has inspired a confidence that his visit will exercise a beneficial stimulus in the working, not only of this particular mine, but on the general mining industry of the locality.

MINING IN SPAIN.—We learn from Almeira (Spain) that the lead smelters have all been forced to put an end to their operations, in consequence of an order from the Government prohibiting the use of brush or underwood, which has hitherto been used for the above purposes; consequently they must either build English furnaces, and smelt with coke, or abandon their works altogether. The small manufacturers have petitioned Government against the order in question; but, in the meantime, the production of lead in this district of Spain cannot fail to be affected to some extent. This may have some influence on our home lead markets.

TIN IN PLUMBAGO SLATES.—Dr. Jackson notices the fact, that the plumbago slates of Vermont furnish on assay, malleable grains of tin and iron, when fused in a crucible lined with lamp-black. This fact appears to Dr. Jackson to indicate the existence of tin lodes in that region.

ENGLAND AND AMERICA.—The steam-ship, *Atlantic*, Captain West, which left New York on the 27th July, arrived in Liverpool at half-past 1 o'clock on Tuesday last, in 10 days 8½ hours, the quickest run ever made.

If a pair of sawyers work twelve hours with a pit-saw, the average weight of which would be 20 lbs., and they took 50 strokes per minute, they would take 36,000 strokes, and lift up 720,000 lbs. weight during that time.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in the engine-shaft, sinking under the 70 fm. level, is from 5 to 7 ft. wide, composed of cupels, spar, and occasionally stones of copper ore. The lode in the 70 fm. level, east of said shaft, is from 4 to 6 ft. wide, worth for copper ore 40*l.* per fm. The lode in the stopes over the back of the 70 fm. level east is 5 ft. wide, worth from 60*l.* to 70*l.* per fm. The lode in the winze sinking under the 60 fm. level, east of the engine-shaft, is 4 ft. wide, worth from 40*l.* to 60*l.* per fm. There is no change in any other of our tutwerk operations since the last report. Our tribute pitches are looking well.

BEDFORD UNITED.—In driving the cross-cut south, at the 115 fathom level, we have intersected what we presume to be the north lode; it is rather small, with a strong capel, and is composed of mundic and some spots of yellow copper ore. We purpose to continue the cross-cut until we reach the south lode. The 103 fm. level is extended about 7 fms. east of the slide; in the present end the lode is full 3 ft. wide, composed of fluor-spar and yellow copper ore: it underlays very little to the south—is worth 4½ tons of 9 to 9½ produce ore per fm., and is altogether a very kindly and promising lode. We have a winze sinking in the bottom of the 90 fm. level, which is 14 fms. before that end, and where the lode is of a similar character; we expect, therefore, that we have a good run of ore ground before us. In Andrew's winze, sinking in the 103 fm. level, the lode is 3½ ft. wide, containing some good stones of ore. In the back of the 103 fm. level, and west of the slide, we have three pitches working, each by four men, at 3*s.*, 4*s.*, and 4*s.* 6*d.* in the 1*l.* In the 90 fm. level east we have, during the last two months, been driving by the side of the lode: the men are now cutting into it. Arscott's winze, in the bottom of the 90 fm. level, is sunk 1 fm. 4 ft. 3 in.; the lode in it is nearly 3 ft. wide, yielding very good work, and presents the same appearance as in the 103 end. In the 80 fm. level east the end is suspended, and the men placed to rise about 3 fms. before the end of the midway level, so as to effect a communication, and thereby improve the ventilation in the 80 and 70 fm. levels. In the midway level the lode is 3½ feet wide, and worth 7 tons of good ore per fm.; the quantity of ore broken by driving the last 4 fms. is rather more than 30 tons. In the 70 fm. level the lode has been recently cut through, and presents more promising indications than when previously intersected; it contains black and yellow copper ore, with some good stones of lead, and is likely to improve, but we are obliged to suspend all operations on it for the present, as the air is dead, and will not be improved until the rise in the back of the 80 is holed to the midway level. The cross-cut north, in the 47 fm. level, is progressing at the rate of 4½ fms. per month, and in favourable ground; during last month we cut through a branch containing mundic and some spots of ore. The tribute department is in a healthy state, and enables us to keep up our samplings with ease and certainty; and I have the satisfaction to add, that we have opened more tribute ground than we have taken away during the last two months. All the machinery is in good order, and we are not now subjected to hinderances from breakages, which frequently occurred before, causing much inconvenience, and adding considerably to the ordinary cost of the mine.

BODMIN CONSOLS.—In our north adit we have been driving through some hard and disordered ground for the last 5 or 6 fms.; now the ground is softer, and the lode appears to be more settled. From the indications, I think the next 6 feet will show something very good. In the winze sinking below the adit, about 50 fms. north of the engine-shaft, we have a most promising lode, from 3 to 4 ft. wide, producing some good work in lead. The winze south of the engine-shaft is for the time stopped, being down to water. As soon as the 13 fm. level has drained this, we shall commence operations here again, having sunk through a good leady lode. I have put those men to sink another place in this adit, where they are raising some good lode. Altogether, the mine looks well, and only requires depth to develope a good mine.

CARTHEW CONSOLS.—In reporting of this mine to-day, I shall in the first place notice the north end 75 fm. level, wherein I find the lode to be large, and of promise, producing good work in copper. The lode in the south end, in this level, continues to look very well, not quite so large as last reported, but yet not containing a less amount of lead ore. The 65 fm. level end north is for the present discontinued (though in it may be seen a large and promising lode), the men being brought back within 30 fms. of the engine-shaft, to sink a winze to the 75, wherein we have a lode about 2½ feet wide, very good indeed. In the south end, 65 fm. level, we have a very good lode in lead: this end is now communicated with the winze sunk from the 48 fm. level, and we find this to be now a well ventilated part of the mine, and a very good lode may be seen for many fms. in height and length. In the middle shaft the lode continues to look well, larger and richer than last reported. In taking a retrospective view of this mine, I can confidently say that she looks very satisfactory. The tribute pitches for August and September are set, every one of which has a very good appearance.

COMBLAWN.—We have fixed the lift in the cistern, and sent down and connected the new main and balance rods. Our castings are not yet arrived for the next lift, but Mr. Nicholls promises me it shall be on the mine by Tuesday. I mentioned in my last that we had broken some good stones of lead; I have since had a sample assayed, and now enclose you the produce; it was taken from a rough stone, but, no doubt, had it been properly cleaned, the produce would have been higher for lead and silver. Copy of assay—produce 11½ in 20, and 25 ozs. 6 dwts. 16 grs. of silver to the ton of ore.

DEVON AND COURTENAY.—The engine-shaft is down to the 60, and the men have commenced dividing the shaft, and putting in the footway and other necessary work, which will be completed next week for driving from the 60 fm. level. The lode in the winze, sinking below the 50, east of the shaft, has a very promising appearance, although at present poor; the lode is above 2 feet wide, and the stratum about it favourable, therefore I hope it will again improve.

EAST BALLESWIDDEN.—Since my last report we have been much engaged in surface operations, such as preparing a level surface for the carpenters to begin to strike out the wheel, making a temporary shade over the saw-pit, as well as erecting a house for the carpenters, and also making a carriage road from the main road into the mine. The timber is brought home for the wheel, and I believe we shall find a very profitable mine.

EAST CROWNDALE.—The 40 fm. level west still looks well. In the 40 east no alteration since my last, lode not stripped down. In the winze sinking below the 28 fm. level, lode tinny. We shall commence sinking the middle shaft below the 40 fm. level on Monday. Our tribute department much as usual.

EAST TRESCOLL.—The ground above the adit level, from the leet to within a short distance of the old engine-shaft, has been taken away, and the timbers laid abroad; this adit has been driven on the course of the Mena lode, which is a fine one, and very rich. We have a miner here who worked in the western end just before she was knacked, nine years ago, he says the tinny part of the lode is 18 inches thick, and 6 inches of it just about solid tin, worth 7600 to 8000 to the 100 sacks of work. When the mine is got in fork the two ends are ready to be set on tribute; it is supposed that the setts are not gone together in the levels, only in the old shaft. We have sunk the trial shaft down to the water, it is in fair ground. Some of the company are expected here in a few days, to set out the ground for the engine and floors. A further report will appear after another week.

ESGAIR LLEE.—The caunter lode in the deep adit, west of Owen's winze, is looking a little more promising than in my last, being full 3 ft. wide, with an increase of friable spar, with small branches of lead intermixed through the lode, yielding about 2 or 3 cwts. of ore per fm. The caunter lode in the 12 fm. level, east from the surface, has now a more promising appearance than for the last 6 or 7 fms. in driving, and will yield on an average 5 or 6 cwts. of ore per fm. The caunter lode, in the stopes in the bottom of the 12 fm. level, east of Owen's winze, is looking well, yielding from 15 to 20 cwts. of ore per fm. The stopes on the same lode, in the bottom of the 12 fm. level, west of Owen's winze, will yield about ¾ ton of ore per fm.; the stopes on the same lode, in the back of the 12 fm. level, east of Harding's winze, will yield about ¾ ton of ore per fm.; the stopes on the same lode, in the back of the 12 fm. level, west of Harding's winze, will produce on an average about ¾ ton of ore per fm. The stopes in the bottom of the shallow adit, east of Morgan's winze, are much the same as in my last, yielding 5 or 6 cwts. of ore per fm. Our new crusher works exceedingly well, and we have now our crop floors in good working order; and in case we may in future be able to obtain a sufficient number on hands on the dressing-floors, to keep away from the crushing mill, we shall soon be able to return the work now on the mine, but at present we are very much deficient of the number necessary.

HEIGNSTON DOWNS.—The lode in the 35 fm. level assumes a more promising appearance, producing a little black and yellow copper ore. The rise in the back of this level will produce 2½ tons of ore per fm. The winze sinking below this level is improved, producing at present some good saving work. The cross-cut south is without alteration. The 45 fm. level, east of Victor's winze, produces good stones of copper ore. The lode in Hitchins's shaft is being spotted with yellow and black copper ore.

HENNOCK.—I have contracted with the men to cut plat, put in bearer and cistern, fix the tie lift, put in main rods, stays, &c., for 12*l.*, which will take nearly a fortnight more to complete, after which we shall commence sinking the engine-shaft. We have 6 fms. more to drive to get as far south as the old men's winze, which I have let to-day at 35*s.* per fm., to four men. I have also two men clearing up the old men's winze, but to what depth it is sunk I cannot tell. I must hole this ground as fast as possible for ventilation, the air, from the closeness of the weather, &c., being so bad that the men cannot get on so fast as I could wish. The part of the south lode we are driving on is a soft gossan, and must make large quantities of the sulphuret of lead under; all that is wanted at Hennock is to go down, and nothing can prevent our having a good mine.

HOLMBUSH.—The 132 fm. level, west of the diagonal shaft, is 20 in. wide, producing 3 tons of copper ore per fm. The lode in the 120 fm. level south is 4 ft. wide, composed of soft spar, prian, and stones of lead. The ground in the 120 fm. level cross-cut south, towards the flap-jack lode, is favourable, we have intersected several small branches within the last 6 ft. driving, all of which are dipping south towards the lode; they are composed of soft spar, prian, and spits of rich copper ore. The 140 fm. level south is for the present suspended. The flap-jack lode in the 100 fm. level, east of the great cross-course, is 4 ft. wide, composed of mundic, spar, and stones of copper ore, apparently at the end of a course of ore; and it is highly probable the next time we take it down a great improvement will take place.

KESWICK.—At Brandley, there is a little improvement in the Salt level cross-cut, and the sump in Salt level; the other parts of the mine are full of water. At Old Brandley, four men are stoping on a piece of ore in No. 1 level, in order to try a piece of ground—a beautiful vein, with good ore in places; in the bottom level we have got the rock in forming this level, and have toshed part of the vein; but not yet begun to drive. At Thornthwaite, the 17 fm. sump is rather poorer; the 17 fm. cross-cut looks very well; the 17 fm. forehead is in rather harder ground; in the bottom level we have commenced driving again; the ore is looking well.

KIRKCUDBRIGHTSHIRE.—The lode in the 62 fm. level end west is very large, with small branches of lead through it, and the ground easy for breaking; it is yielding about 7 cwts. of lead ore per fm.; the water is still in at Stewart's shaft; the lode in the engine-shaft under the 50 fm. level is 4 ft. wide, worth from 8 to 10 cwts. of lead per fathom; we are expecting a vessel daily to take a cargo of lead.

PENTIRE GLAZE AND PENTIRE UNITED.—These mines have considerably improved lately. In the bottom level, which is 10 fms. below adit, we have driven through about 25 fms. of productive ground on the middle lode, which still continues productive. The backs can be worked, and the lead raised at 5*l.* per ton; the lode is large, and the leader, or principal part of it, is about 2 ft. wide. The stopes are also looking well. We shall now increase our returns. The engine-shaft at the South Hill is down to the 30 fm. level, and the sumpmen are engaged in cutting a plat; we shall commence driving in about a week, and expect to cut the lode in a few days after. The 20 fm. level south is looking better, the lode producing good stones of lead. We are also making preparations for sinking the north engine-shaft.

SOUTH BALLESWIDDEN.—I am glad to inform you that, after a long time, we have communicated our adit level to the main shaft; we expect within a day or two to fix the launders to take off the surface water, after which we shall begin to drop the lift, and attach our rods to the adjoining wheel, so as to enable us to clear up old works.

SOUTH WHEAL JOSIAH.—In laying before you my report, I would first remark that we have driven west on the north lode about 76 fms.: the greater part of this level has gone through a large and promising lode, and in places producing good work for copper. In the last month we drove south through the lode, where we found it more than 12 ft. wide, but rather in a disordered state, with capels, killas, spar, wundic, and some good stones and faces of ore through the lode; although I cannot say the exact distance, it is certain that a large cross-course is before us, and at no great distance—from the best calculation I can make, about 20 fms.—where we may expect a great change in the lode, and a course of ore. On the south tin lode we have sunk about 15 fms., partly through ground and some through old men's workings, where the lode has been taken away for tin; but the lode we sunk through (although producing at times good stones of tin) will not pay for working away. The shaft is now down to water, and is suspended for the present, and the men are employed sinking shode pits to cut the Bedford and Hawkemoor lodes, and from the last pit I find some rich shode thrown up, with black and yellow ore in the stones, and from these indications, I think we must be near a good lode, which I hope in a few days to find.—[This report was presented at a meeting, held in Tavistock on July 25—the accounts were noticed in last week's Journal.]

SOUTH WHEAL TRELAWNY.—The cross-cut is still driving west in the 60 fm. level, but nothing more seen worth a notice since last reported, and ground just the same. The 50 fm. level north, on the course of the lode, is driving by two men; the width of the lode is from 1 ft. to 18 in., composed of spar, flookan, mundic, killas, and occasional spots of lead and copper ore, also ground favourable; in the last week it has been discharging a little more water.

TREBELL CONSOLS.—We have put two men to clear up in the bottom of the adit level, where the old party crossed a tin lode, and found good work at once—I will write again in a few days with all particulars. We shall put two men to sink on the lode from which we returned tin last summer. We have two men in the bottom of the adit, and two in the field, where we have a beautiful branch of tin; the springs being low, we can sink without inconvenience.

TRELAWNY.—At Phillips's shaft, in the 82 end north, the lode is 3½ ft. wide, worth 8*l.* per fm. In the 62 north the lode is 2 ft. wide, worth 8*l.* per fm; in the winze under this level the lode is 2 ft. wide, worth 9*l.* per fm. At Trelawny's shaft, in the 92 end, the men are put to drive north and south by the side of the lode, as we are not yet prepared to cut through it until we have fixed a larger lift to take off the increased quantity of water by so doing. In the 82 north the lode is 2½ feet wide, worth 9*l.* per fm.; in the 82 south the lode is 3 ft. wide, worth 8*l.* per fm. In the 72 north the lode is 3 feet wide, worth 9*l.* per fm. At the north mine, we are clearing the 80 north of Smith's shaft to resume the driving as soon as possible. The stopes in the back of the 82, north and south of Trelawny's shaft, are improved—the others are much as usual. We sampled on the 5th inst. two parcels of lead ore, No. 1 crop, computed 100 tons; No. 2, common, computed 36 tons.

TRELEIGH CONSOLS.—On Christoe's lode, in the 100 fm. level, west of Garden's, no lode taken down this week. The rise above the 90 fm. level is holed to the winze below the 80 fm. level; the men will drive the 90 west next week. The winze below the 80 fm. level is holed to the rise above the 90 fm. level; the men will stope the back of the 90 next week. In the 70 fm. level, west of Garden's, the lode is 2 ft. wide, worth 5*l.* per fathom; in the winze below the 70 fm. level the lode is 3 ft. wide, worth 6*l.* per fathom; in the stopes above the 70 fm. level, east of Stevens's winze, the lode is 3 ft. wide, worth 7*l.* per fathom; in the stopes, west of ditto, the lode is 2½ ft. wide, worth 9*l.* per fathom. In the 52 cross-cut, north of engine-shaft, on Parent lode, we have cut the lode, but cannot tell much about it, as it is disordered by the cross-course. In the 40 fm. level, south of ditto, we cut the lode last week west of cross-cut; it is 20 fm. wide, with good stones of ore, and is looking kindly. In the 40 fm. level, east of ditto, the lode is 18 in. wide, with good stones of ore, and is looking more kindly; in the 40 fm. level, east of Parent's shaft, the lode is 18 in. wide, and looking more kindly. In the adit, east of Nicholson's, on middle lode, lode 1 ft. wide, worth 3*l.* per fathom.

TREVILLE (SILVER-LEAD).—The water-wheel was put to work on Saturday, the 3d inst., and started off in the most satisfactory manner, having forked 7 ft. in the shaft in half-an-hour. We are now in a position to prosecute the shaft with vigour; this shaft is 9 fm. 4 ft. 8 in. from surface, and on Saturday last (being our monthly pay and setting day) we set 10 fathoms to sink, by nine men, at 5*l.* per fathom, which we trust will be completed in five weeks. The adit on the caunter lode was also set to three men, at 28*s.* per fm. We have now driven 20 fms. on this lode, and a more promising level cannot be seen. On Friday, the 2d inst., some fine stones of lead were broken in the end, and there can be no doubt of our having a very productive lode at our next level (the 20). We were visited last week by three very experienced miners, who concurred in opinion that a more promising lode was not to be found, and that at a comparatively small outlay it will become a most profitable mine.

WELLINGTON.—The cross-cut in the 50 fm. level is driven north of the engine-shaft 1 fm., and I expect there are 6 fms. more to reach the lode at this level. The lode in the 42 fm. level, east of Parcolly shaft, is about 1 ft. wide, worth for copper and tin 10*l.* per fm.; in the same level west we have been obliged to alter the position of the driving, for the purpose of reaching the western discovery; consequently, the driving will be nearly north, and not on the course of the lode. On reaching the lode at this point, we shall have 80 fms. of ground above this level; and from the appearances in the 10 fm. level, we have every reason to expect from this ground good returns for copper ore. The lode in the winze sinking under the 30 fm. level, east of Parcolly shaft, is 15 inches wide, worth for copper and tin 15*l.* per fm. The lode in the 32 fm. level, east of said shaft, is 2½ ft. wide, and on the north part there is a branch 4 in. wide, producing a small quantity of tin; the other part of this lode is spar. There is no change to speak of on the north lode, neither in the cross-cut north, in the adit level, since my last report. The lode in the adit west is at present small; this is west of the western whim-shaft, on engine lode. In the 10 fm. level, east of the last-mentioned shaft, the lode is 1 ft. wide, nearly all ore of excellent quality, worth 16*l.* per fm.; this is the ground referred to in the former part of this report. At our setting on Saturday last, we set in this ground five tribute pitches, at the average tribute of 4*s.* 3*d.* in 1*l.* Our tribute pitches, on the whole, are looking pretty well.

WEST DOWNS.—Having proved it to be impracticable to develope the lode deeper under the old works, where the tin sold, and more risen, came from, in consequence of the great influx of water, it was thought advisable to commence the sinking of a shaft, to take the lode 20 fms. under the surface; in the meantime to drive a cross-cut at the 10 fm. level, which will be 3 fms. deeper than the present shaft, where the ore was taken from. A lobby has been brought into the perpendicular shaft, about 6 feet under the surface, to take off all the surplus water possible, and the new shaft sunk 5 fms. below the adit, towards the intended level. The stratum is a blue killas, mixed with spar occasionally. I think the killas is congenial for tin ore, and not so hard as I anticipated; however, such progress cannot be made in sinking as I could wish, in consequence of so much water to be drawn by manual labour; therefore, I would recommend a small steam-engine to be immediately erected, of sufficient power to drain the mine 20 fathoms deep, and admit of the application of a stamps being attached, for the purpose of getting the ore already risen, and what may hereafter be extracted, fit for market.

WEST WHEAL JEWEL.—The 85 fathom level, west of Williams's cross-course, on Wheal Jewel lode, is unproductive—drove last month, 2 fms. 2 ft. The 78 fm. level, west of ditto cross-course, on the same lode, is worth 5*l.* per fm.—drove last month, 1 fm. 3 ft. Treweek's winze, in the 70 fm. level, west of ditto cross-course, on the same lode, is unproductive—sunk last month, 1 fm. 4 ft. 6 in. The winze in the 57 fm. level, west of ditto cross-course, on the same lode, is unproductive—sunk last month, 1 fm. 1 ft. (this winze is suspended for a short time, until we communicate on Williams's flookan). The rise in the 47 fm. level, on Williams's cross-course, rose last month, 4 ft.; the winze in the deep adit, on ditto cross-course, sunk last month, 3 fms. 1 ft. 6 in. The 57 fathom level, east of Hodges's cross-course, on Tolcarne tin lode, is worth 20*l.* per fm.—drove last month, 1 fm. 3 ft.; ditto, west of ditto cross-course, drove last month, 1 fm. 5 ft.—the lode is heaved by a flookan: we are now driving on ditto, in search of the lode; we have had a good stone of tin west of ditto cross-course—that is, between the cross-course and the flookan. The shallow adit level, west of Tregoning's shaft, on Tolcarne tin lode, is worth 10*l.* per fm.—drove last month, 1 fm. 4 ft. The winze in the 30 fm. level, west of quarry shaft, on the same lode, is worth 9*l.* per fm.—sunk last month, 3 ft. The stopes in the back of the 12 fm. level, west of Pryor's winze, on the same lode, are worth 13*l.* per fm.; the stopes in the bottom of the 12 fm. level, on the same lode, east of Tregoning's shaft, are worth 27*l.* per fm.; the stopes in the bottom of the same level, west of ditto winze, are worth 24*l.* per fm. These stopes are working on tribute.

WEST WHEAL VIRGIN.—The lode in the engine-shaft continues its regular size, and produces good tinstuff. We intend to stop sinking the shaft, and begin to drive levels east and west on the lode; and so soon as we are in far enough with the levels, shall immediately commence to sink again. Everything throughout the mine goes on regularly, particularly the wheel, which appears to work with little or no friction.

WHEAL CREBOR.—*Aug.* 1.—According to promise, I send you my views of the import of your letter, of July 30—You desire to know how near the end the stones of ore from Rundle shaft came from. I broke them about 15 fms. from the present end; there is ore within 5 fms.; the end will be cleared to-morrow, and we will commence driving west at once, according to your request. To-day I have been to the adit, at Rundle shaft; there is 3 ft. deep of water in the plat, at that shaft, as we proceeded west towards the end I found that we can drive the adit level into the new ground, without clearing the adit east of Rundle shaft, which is a very important point obtained, as it will be proving the new ground 54 fms. in perpendicular depth, and as so many 100 tons of ore have been taken up at that level, I think every effort ought to be made to drive this end into Beauford's land with all possible speed; the whole of the lode, both back and bottom has been taken away apparently nearly to end. As the large bottoms under the adit are all full of water, and the gunnises so wide, it is impossible to get into the end before we put a platform, or road over the same, which I think we can do in a few days, with trifling expence. I cannot say what is to be done, or how far the end is from the great bottoms referred to; but I do not think it any great distance; if so, it is possible I may be able to see the end the latter part of next week. I have been informed that the lode is promising, and contains ore in this end. The cross-cut, near Kelly shaft, pointed out by Mr. Dean, is the same point I should decide on, as it is parallel to the large deposit found in the main lode. Since the water has been forked, I have minutely inspected the different parts drained and cleared, and should suggest the following remarks respecting the south cross-cut, near Kelly shaft: the 24 is driven west on the south lode about 14 fms. from the east cross-course, and there are about 12 or 14 fms. more to drive to meet the western cross-course, which will be proving the lode that distance, and bring us parallel to the rich lode, called the main lode; I expect the average expense will be for driving this end that distance about 4*l.* 15*s.* or 5*l.* per fm., and it will require a cross-cut to meet the same lode now driving on at that point 20 fms. or upwards, and if the cross-course should be hard it would cost 5*l.* to 6*l.* per fm. I should recommend the same level to be driven on the south lode to the western cross-course, and if found at that point, it is not the south lode opened by Capt. Barratt in the open cutting in the meadow; we would then drive south from that point on the cross-course and prove it. If found productive in this level, it will be necessary to put our pitwork down Kelly shaft, and fork deeper, and cross-cut at deeper levels, when we can prove the effect of the slide, &c. I believe, had the pitwork been to the 34, instead of the 24, and a cross-cut put into that level, it would have been five to one in favour of good results—the like effects took place on the main lode. The cross-cut north suggested by Mr. Dean could be put out, and I think it very advisable to do so. The cross-cut south at Gill shaft shall be attended to, but I shall require some days more to clear some places filled up by the tributers at the 30, which will throw a great light on this part of the mine, the results of which you shall have on the earliest opportunity. The machine for drawing is working tolerably well, as well as the engine and pitwork. The work generally is progressing as favourably as can be expected, considering the delapidated state the shafts, levels, &c., were in. One fortnight more, and the miners will all be working on ground carrying out those points that may be thought most advisable to throw the mine open, and I trust the results will be valuable discoveries. I have set another pitch to four men at the back of the 24, on the same terms as the other pitches.

— *August* 7.—There is no alterstion in the 34 fm. end, on the south lode, it being still disordered and poor. I think it probable that the south lode cut in costeaning the meadow by the last company is still further south—that we shall shortly be able to ascertain. The lode in the 15 fm. level, on the south lode, was producing some good stones of ore when taken down last; I have ordered the men to dress the lode, as I expect it will pay for saving—they will take down the lode to-morrow morning; as this end nears the

great cross-course, I am in hopes we shall see a good improvement. I shall put a pare in the end of the 40 fm. level, as well as in the adit west of Rundle shaft, on Friday or Saturday, to drive into Beauford's land with all possible speed, as this is all new or untried ground. I find at the adit the whole of the ground, both above and below the level, is all stoped away to within 6 or 7 fms. of the present end, as it is represented in the section you have of the former workings; the lode in the present end is poor and small, which is no other than must be expected—I think it probable the main part of the lode is south of the end. I should have commenced the above levels earlier this week, but some places in those levels not being sufficiently safe, I thought it advisable to secure the same before putting the men into the ends. The tributers are breaking some ore; work, and are likely to raise a fair sampling of ore; this taking being the first, and a short one, and the mine being stopped for so many years, it requires some time to get their pitches in order to work to the best advantage. I think it probable we shall be able to sample several tons of ore every two months, to help out our cost, to some extent, in exploring untried ground, after things are got in order.

WHEAL MARY ANN.—Pollard's shaft is sunk 3 fms. below the 60 fm. level; there is a branch in the shaft which we believe to be a part of the lode, 15 inches wide, composed of can, and good stones of lead; this branch is nearly perpendicular, and we expect will fall into the other part somewhere about the 70 fm. level—reasoning from analogy, we may expect a good course of lead at their conjunction. The lode in the 60 fm. level, north of the shaft, is 1½ ft. wide, and worth 6l. per fm.; in the same level south is 2 ft. wide, and worth 8l. per fathom. The lode in the 50 fm. level south is 2 ft. wide, and worth 8l. per fm. The lode in the 40 fm. level south is 1 ft. wide, and worth 4l. per fathom. The lode in the 70 fm. level, south of Trelawny boundary, is 3 ft. wide, and worth 14l. per fm. The lode in the 60 fm. level, south of Barratt's shaft, is 2 ft. wide, and worth 9l. per fathom. The stopes generally throughout the mine are very productive.

WHEAL MARY EMMA.—The operations recommended at the last meeting have been carried on with all dispatch. We have reached the cross-course on the top of the stope, and expect to get through it this week, after which we shall break a greater quantity of tin for the stamps, having, as I expect, nearly passed through the poor ground. I have set to the men at 50s. per fm. for the month. The stope which I calculated to be about 9 ft. high is 12 ft., which will be of increased advantage to the company when we reach the tin ground. The tin stuff taken from the rise is still under the rise, and will continue there until we communicate with the shaft above, which will be accomplished during the present month: after which, I shall be able to break more tin, and also to give a clearer statement of the quantity of tin to be obtained. There is about 8 ft. to communicate; I have set 1 fm., to four men, at 8l. per fm. The lode is about 2 ft. wide, saving work. I have had the lode opened upon at two or three places further west, on the top of the hill; it produces tin, but is not rich. We should have made greater progress in dressing the tin had it not been for the difficulty in clearing away large rocks and floors of stone to make the dressing floors, which are now about completed. We have now ready for market about 2 tons of tin.

WHEAL PENHALE.—The sumpmen are engaged in driving south in the 40 fathom level on the side of the lode for a little distance, to enable us to cut more easy through it, which would be very difficult to do otherwise. In the north end, in the 30 fm. level, we have this week met with a very good improvement; the lode is very large (size unknown), with a leader of about 1½ ft. wide, very good work for lead and copper on the west side of it; in the south end, in this level, we yesterday and to-day took down the lode for about 9 ft. in length, and found it to be very good indeed; a solid leader of lead, about 6 inches wide, is to be seen up and down the end, besides a diverisification of ore throughout the other portion. Since my last report we have commenced driving the 20 fm. level north; the lode in it is about 3 ft. wide, and producing good work throughout. The tribute pitches for August and September are set, which generally show well. The appearances generally in this mine are very much improved since last reported on, and bid fair for other and more important developments.

WHEAL TREMAYNE.—At Laurie's shaft, on the north lode, in the 30 fm. level west, the lode is 2 ft. wide, unproductive. At Champion's shaft on the north lode, in the 10 fm. level west, the lode is 16 in. wide, worth 5l. per fm.; ditto east, the lode is 18 in. wide, worth 7l. per fm. In the winze sinking below the adit level, east of shaft, the lode is 9 in. wide, worth 2l. per fm. In the winze sinking west of the shaft, the lode is 1 ft. wide, worth 3l. per fm. In a shallow level driving east of shaft, the lode is 20 in. wide, opening tribute ground. At Madron's shaft, on the south lode, in the 70 fm. level west, the lode is 3 ft. wide, worth 8l. per fm. In the 60 fm. level west, the lode is 2½ ft. wide, worth 8l. per fm. At Painter's flat-rod shaft, sinking below the 30 fm. level, the men will complete the sump this week, and commence driving in the 40 fm. level next week; the lode in the bottom of this shaft is 3 ft. wide, composed of flookan, capels, and mundic, with stones of ore, not to any value. In the winze sinking below the 30 fm. level, east of shaft, the lode is 9 in. wide, opening tribute ground. In the winze and stopes below the 30 fm. level, driving west of shaft, the lode is 20 in. wide, worth 20l. per fm. In the 30 fm. level, driving west of shaft, the lode is 15 in. wide, composed of gossan, brunt, and spar, with spots of ore, not to any value. In the west whim-shaft, sinking in the above level, the lode is 9 in. wide, composed of flookan and mundic, with spots of ore, not of any value. At Allan's shaft, on Allan's branch, in the 53 fm. level, west on south branch, the branch is worth 5l. per fm. In the 45 fm. level, west on south branch, the branch is worth 7l. per fm. In the 35 fm. level, west of new shaft, on a south branch, the branch is 3 in. wide, with stones of ore. The boundary shaftmen are engaged fixing plunger lift in the 30 fm. level, which will be set to work shortly. Our tribute is looking much the same as it has for some time past.

WHEAL VENTON.—Agreeably with your request, I have visited the above mine, and carefully surveyed the surface of the sett, and the partial workings already explored on the course of the lode, and beg to hand you a few remarks thereon—viz.: the formation of the sett at surface is what I believe that every practical miner would pronounce good—being concave for a great length, and the stratum a beautiful killas or clayslate; it is compact, yet favourable for exploring. A perpendicular engine-shaft is in course of sinking, and, agreeably with the underlie of the lode, will intersect it in the 40 fm. level, which will not take long to accomplish, should the ground continue as it is at present—10 fms. 3 ft. having been sunk in four weeks through such a stratification that is every way congenial for mineral; the lode has been laid open in some costean pits at two or three different points; the last place it was intersected is about the centre part of the sett, where it is 6 ft. wide, underlying east about 7 in. in a fm.—nearly all gossan, and that of the finest description. I may venture to say, without exception, a more promising lode I never saw; and I can recommend it as such to the notice of any party who may be inclined to adventure therein, believing they will be amply rewarded for the outlay. This is a continuation of the Trelawny and Trehane lode, and is nearly adjoining them on the north—the productiveness of which has been long known.

WHEAL VINCENT.—We have cut the north lode in three places since last week, 30 fms. east down the hill, and find it to be giving every indication of a good lode in depth, being composed of a beautiful spar and gossan, and a soft channel of ground by the side of it. Our engine is working remarkably well, and the water is down to the back of the level. If the streamers did not pool the water, we should be able to work in the bottoms at the present time: only let us have a good shower or two of rain, we shall be in fork, and the men at work below.

FOREIGN MINES.

COPIAPO MINES.—Mining report, dated Copiapo, May 28:—

Copper Mines—Checo.—In the 30 fm. level, east of Harman's shaft, the lode is still large, carrying a good branch of ore, 18 in. wide. In the 20 fm. level, east of Harman's shaft, we continue to break some good ore, but on the whole this place is not looking so well as when last reported on. The winze now being sunk in the bottom of the 30 fm. level, to the west of Harman's shaft, still holds out, and bids fair to prove a very productive piece of ground. It continues to give ore of superior quality, but not a large quantity. The stopes in the back of the 20 and 30 fm. level are yielding ores of good produce.

San Pedro.—Here we are progressing as fast as we possibly can with our different operations. In the 12 fm. level west the lode is 2 ft. wide, but not so rich as it has been; at present it is split in branches, the whole of which are giving ore of good quality. The ground continues rather hard in the adit level on the manto—still it maintains its size, 2 ft. wide, and is giving good stones of ore. We hope, in the course of a month, to commence sinking in the old working, so as to form a communication with the above level, and when this is completed we shall be in a position to stope away some good ore ground, and shall consequently increase our returns.

La Compania.—In this mine we have begun to drive two levels from the shaft—one to the east and one to the west, on a large lode. In the eastern end we have a good branch of ore, 1 ft. wide, of very superior quality; and in the western end, although the lode is large, 3 ft. wide, yet it is comparatively poor. In the chiffon, or winze, sinking on this lode we have a good branch of ore, 9 inches wide, and with every appearance of becoming larger.

La Reyna.—In No. 1 shaft the lode has been heaved, or thrown, out of its natural course by a slide, and consequently we are now driving to cut it. No. 2 has been suspended during the present month, but it will be resumed again in a few days. At No. 3 shaft we have a large lode, 4 ft. wide, composed of ore and gossan; this is a fine back, and the best, without exception, that I have seen in Chili, and I shall be greatly surprised if it does not in depth give us a large and rich deposit of copper ore.

Produce for April.—	Checo	*Tons* 30
,,	San Pedro	15
,,	La Compania	10
,,	La Reyna	9
	Total	*Tons* 64

Tres Puntas, May 28.—Silver Mines—Al fin Hallada.—Our prospects here continue to improve. In the 5 fm. level the lode is 1 ft. wide, and giving ore of an average quality. In the 10 fm. level, for some time past, the lode has been comparatively poor, but at present it is 1 ft. wide, and giving ore of 200 marcs per cajon. In the 15 fathom level, although the lode maintains its size, yet it is not rich. In the 20 fm. level the lode is 3 ft. wide, and producing ore of from 250 to 300 marcs per cajon. From the pique below this we have commenced a new level, in which we have a large lode, giving ore of an average quality. The lode in the bottom of the pique is 2 ft. wide, and giving occasional stones of silver ores. The labor, or level, to the north is still yielding some very superior class ore. In sinking the new shaft (which is down near 20 fms.) we have intersected a mareto, and it must shortly come in contact with the lode in the pique, and I think, at this junction, we may fairly expect something good.

San Jose del Carmen.—Our prospects here since my last are somewhat improved, for in one of the labores some low quality ore has been broken, and it is giving fair indications of shortly improving. I hope in my next to have to report a rich lode here.

Merceditas.—This mine still continues to flatter us, and appears almost every day to be on the eve of bursting forth with a rich alcance. In sinking the new shaft, which is down near 10 fms., the lode is continually giving a little silver, with a stratum of ground quite congenial for a bunch of ore. In the 25 fm. level, driving towards the shaft, the lode is 18 in. wide, composed of a beautiful clay, with quartz interspersed throughout, and some thin planas, or horn silver. In each of the other labores we have a large lode, and producing at times a little silver. My opinion regarding this mine is not at all changed, and I think it will shortly become of considerable consequence in the mineral.

Santa Ana.—During the past month we have been sinking in two chiflons, in each the lode has the same flattering appearance that it has hitherto had. In fact, I have been much disappointed in not having to report a good bunch of silver ore here.

Carmen Alto and Plomiza.—We have in the past month been sinking our chiflon with all dispatch, and are now down about 8 fms., in which the lode is 6 in. wide, and although poor it has a kindly appearance. In the cross-cut to the west of the shaft we have intersected several branches, but we believe the main lode to be still before us, and I may say the same regarding the cross-cut driving to the east of the shaft.

Colorado.—In sinking our chiflon, in the bottom of the 20 fm. level, in a southerly direction, which is down 8 fms. below the said level, we have a lode 3 ft. wide, composed of clay and quartz, with a beautiful channel of ground, and I think we cannot be far from some of the cross branches which are before us, and when intersected we expect something good. We still continue to drive our 20 fm. level north, in which we have a lode 18 in. wide. This level we are pushing on with all speed, so as to intersect a cross lode to the north, which we hope will make a favourable change here. We are also sinking on the above cross lode, which is 18 in. wide, and has a favourable appearance.

Gold Mines—Descubridora de Oro.—During the past month we have been driving both east and west in the bottom of the mine, and in each of the levels we have a lode, 9 in. wide, giving a little gold ore; still, I think, it will not pay to carry to the city, with the present rate of freights; but had we some means of cleaning it in the mine, it would pay very well; and this, I think, can be rendered available now, for during the last month we have cut water, and this, you know, is of considerable consequence as regards the cleaning of the ores.

Segunda Esperanza.—On the silver lode we have done but little during the past month, having no men to spare, and on the gold lode it has been much the same; however, at present we are sinking on a lode 9 in. wide, which, I am sorry to say, is very poor.

Santo Domingo.—In this mine we have a pretty lode, 1 ft. wide, both in the level and winze below; it is composed of gossan, with sprigs of gold ore at times; still it will not pay to send to the city; yet sometimes we get a good stone of ore, and we are on the tiptoe of expectation, thinking that every breaking down of the lode will give us something good.—In the mineral ground generally things are looking well, for during the past month several mines, from being comparatively poor, have become rich; and I again repeat, that it only requires time and perseverance to develope the rich resources of some of the company's mines. I am glad that you intend shortly to go to Flamenco, and to commence working the mines there. I shall be most happy in accompanying and rendering you every assistance in my power.

IMPERIAL BRAZILIAN MINING ASSOCIATION.—Gold report:—

May 23d to 2d June—	From Gongo	*Lbs.*	1 7 8	0
,,	From Bananal		11 10 15	0
	Total raised	*Lbs.*	13 5 11	0
Total from 1st January to 2d June—	From Gongo	*Lbs.*	80 8 1	0
,, ,,	From Bananal		138 0 19	0
	Together	*Lbs.*	188 9 0	0

Bananal, June 3.—I have the pleasure of informing you that our proceedings here are going on regularly, and, I may add, satisfactorily. Our 24 fm. level, east of Gibson's shaft, has been driven 2 fms. 2 ft., and the ground at present is favourable, both as regards our making future good progress, and to the productiveness of the vein. Some samples taken from this place during the last few days have been very promising, producing very large grains of gold, doubtlessly showing that the veins continue to be productive to this depth, and much below it; in fact, from general appearances, I have strong hopes that our expectations of produce from the ground now above this level will not disappoint us. I feel very sanguine with regard to our prospects, and consider myself justified in stating that we have very strong grounds to hope for future good results from the mine. You will please bear in mind that the main vein (Thomas's) on which the mine was purchased has not been touched since my taking charge of your affairs; we shall now, however, very shortly be in a position to operate on it. The vein in the back of the 14 fm. level has lately been disordered, and, consequently, not so productive as it has been; notwithstanding, its appearance gives us hopes of its recovery after we have passed through the disordered ground. Some specimens produced well; the gold was of a beautiful colour, and I should suppose of excellent quality; it was almost a pity to break them up, but I had no means of sending them to you without doing so. We have succeeded in making a 16-inch plunger pump, which I hope, before I have the pleasure of addressing you again, will be fixed in Gibson's shaft and worked by the iron wheel; this will supersede entirely Thomas's old wheel, which is nearly falling to pieces, and is so rotten that it cannot be repaired. The work for the new 42-feet wheel, for Thomas's fall, is in progress. The piece of timber for the axle has been brought here from Gongo, and I have contracted for the carriage of some of the heaviest timber for the bob, &c., all of which I hope will be on the mine in a fortnight. I have the pleasure of informing you that a large quantity of the railway iron and other materials, for the Messrs. Tregoning, have reached Gongo; these were very much required, as the tunnel is now long, and the extracting of the stuff by horse carts very tedious. A large portion of these materials, together with the 21-inch pumps, &c., for us yet remain in Rio, and I learn with much regret from the agents, that there is a very little chance of their being forwarded, owing to the great dread the troopers have of the prevailing epidemic.

Gongo Soco.—The production here is again very little, but as the tunnel is rapidly advancing (now in 77 fms.), we may soon hope for better returns. The repairs to Walker's stamps have been completed, and we have now 75 stamp heads at work.

LINARES MINES.—The following has been received from Mr. H. Thomas:

Linares, July 28.—I wrote you last under date 20th inst., since when we have holed Wilson's shaft to the 45 fm. level, the lode continuing as last reported. Before commencing to cut the plat here, preparatory to further sinking, we have put the men to cut a piece by the south of the shaft, in order to ascertain the width of the south lode for our future guidance. San Juan shaft is about 3 feet under the 31 fm. level; the men have been cutting the winze plat, preparatory to sinking to the 45, and on the completion of this work in the beginning of the week, they will also be set to sink at a moderate price. We have set four men to drive the 31 fm. level, east of Shaw's shaft, at 250 reals per vara, and ½ real per arroba for the lead. The lode contains occasional stones of lead. Shaw's shaft is sunk under the 31 fm. level 3 varas 2 ft. 9 in., the lode is at present unproductive; this is reset at 300 reals per vara, to six men, with ½ real per arroba for all lead saved. The men driving the 45 fm. level east have driven during the three weeks of the past month 3 varas 1 ft. 9 in., the lode being for half that distance worth, as advised, about 4 tons per fm., and for the latter part from 1 to 2 tons per fm., the back and bottom being much better than the end; the end is at present worth 1 ton in a fm. We have reset this end to drive by four men, at 200 reals per vara, and ½ real per arroba for the lead. Our tribute pitches are looking well, and we have been successful in reducing the tribute, as you will see by comparing the present setting list with the last:—East of engine-shaft, in the back of 45 fm. level, four men at 25s., and four at 30s. per ton; in the bottom of 31 fm. level, four men at 41s. per ton; west of the engine-shaft, back of 45 fm. level, four men at 25s., four at 30s., four at 33s. 4d., and Thomas Faull and one or two labourers at 33s. 4d.—the sinkers paying ½ real per arroba dressing cost. The whim in Shaw's shaft is working well. I have arranged for the purchase of another iron centre piece, rope, &c., for the new whim about to be erected on San Juan shaft, which will be done without delay. You will observe, by the last month's (July) account of ore weighed in, that we have dressed during that month 93 tons. I have also the pleasure of advising you that the Governor of Jaen, in answer to my petitions for the determination of the boundaries (*demarcaciones*), and for the formal possession, appointed Wednesday last for that purpose, when the Alcalde and one of the Government engineers attended, with an escribano, or notary, to go through the necessary forms, which were all done in a regular manner. I have not yet received the copies of the attestation, &c., but I have the satisfaction of assuring you of the perfect regularity of all the papers, and that we have done here all that is required. Five English miners have arrived from Guadalcanal, whom we will dispose to the best advantage possible for the purpose of the association. I am not aware that we shall require any others for a long time, and I hope not at all.

Stock Account, week ending July 27, 1850.

July 20.—	On the mine, as per account furnished	*Tons*	138¾
,, 27.—	Weighed in this week		24 —162¾
	By sent to Seville, 20 tons; Malaga, 20 tons		40
	Tons		122¾
	At Seville, 24 tons; Malaga, 20 tons		44
	Total of ore in stock		166¾

NATIONAL BRAZILIAN MINING ASSOCIATION.

Cocaes Mine, June 4.—In the absence of any remunerative stone, it was considered judicious to place as large a force as possible at the pumps, where we have succeeded in lowering the water to the level of our old roadway; but it has been at the expense of immediate produce. We are truly distressed at the falling off, but look forward with next to certainty to recovering ourselves as soon as the wheel is put in motion, which we have every reason to suppose will be the case in three or four days.

Cocaes produce, from 24th May to 3d June	*Mks.*	1	2	6	41
Cuiaba produce, from 18th May to 27th May		1	3	6	51
Total	*Mks.*	2	6	5	20

ST. JOHN DEL REY MINING COMPANY.

Morro Velho, May 28.—Gold extracted to date, 13,533 oitavas, from 869·29 cubic feet of sand (result of 20 days' stamping) = 15·57 oits. per cubic foot. I have some hope that the third division of the month, through which we are now passing, will prove more productive than the two first.

Stamps working 27 days, average 94·65 heads. The supply of stone continues ample for our wants, enabling us to reject a few tons every day, though our boring force has been much reduced during the last 10 or 11 days, owing to the absence of the greater proportion of the Brazilian borers, who have been attending some bull fights and other festivities, which took place in the neighbourhood during the past week.

THE WORTHING MINING COMPANY—(South Australia).

Adelaide, March 30.—I beg to hand you a report, supplementary to the last monthly one, when we deferred judgment upon the best place for the first engine-shaft. We have now fixed upon the Middle Gully, having seen 15 fms. on the course of the lode, and cut through it at the inner end, where, as well as at the cross-cut, it is from 3 to 4 ft. wide, showing copper ore and gossan the whole length. This 16 fms. is all that we have seen of this lode; at this depth of 8 fms., we think the ground is more favourable about the Middle Gully. Then, looking at the regularity of the lode, and its improvement for ore from the surface downwards, we calculate upon arriving at remunerating depths here much earlier and cheaper than elsewhere.

April 1.—In the end south, we have driven through about 12 fms. of orey ground; that is to say, where we have cut into the lode now and then for that distance; spots of ore are pretty thickly diffused throughout, but not rich enough to save yet. Home to the end we have cut through the lode, which is about 4 ft. wide, well-defined, and contains less ore; yet, upon the whole, I consider it equally promising; the spar is more transparent, and the lode a little softer, containing stones of good looking gossan. The hard ground at this point pressing so hard upon the lode, it is considered advisable to cut into and drive under the lode, where we have soft ground for about 4 fms. wide, which was discovered in the cross-cut. The end west being more "weepy" the distance driven, and on Saturday last having cut a thread of carbonate of lime, containing spots of mundic, indicate that we are near the third lode. In my last, I told you that we anticipated sinking an underlie shaft, but as it would be more expensive in the wear and tear of materials, and not so permanent as a perpendicular shaft, we have pitched the latter in the soft ground, about 15 fms. north of the ore, whence we think we can arrive under the ore as soon, or sooner, than if we commenced it in the hard ground opposite the ore, and shall, at the same time, prove that part of the lode, at whatever depth we may sink and drive. As there seems to be a better looking gossan more than half way up the hill than elsewhere, and the ground, I think, dipping north, there is some probability of its throwing a shoot of ore in that direction; consequently, the shaft may be in the right position, even were the ground soft opposite the ore. The water-wheel shaft looks much the same, with the exception of more water; and, if we can shortly get timber and plank for dividing it down, I hope to be enabled to work the whim by the end of this, or the middle of next, month. The dam will be finished in three or four days more, and the whim-round, I hope, will be finished by the end of this month; that is, against next survey day. The reason why we have been so long about the whim, is in consequence of being obliged to cut it out of a rock, and some of it pretty hard, too. I only wish it could be managed so as to sink on the course of the lode opposite Hodgkinson's shaft, where we should be both sinking and proving the lode at the same time.

April 3.—We have now to acquaint you that the committee inspected the mine on Saturday last, and particularly the works at the middle gully; and it appearing that the copper indications accompanied with gossan continued to exhibit themselves on the lode in the 8 fm. level, showing a total extent, as far as the driving has gone, of about 16 fms of lode in that level for copper; and the inspector and captain having expressed themselves satisfied of the probable existence of a course of ore in depth, and recommending that an engine-shaft should be proceeded with, it was resolved that an engine-shaft should be carried down in this part of the mine, and the necessary arrangements were made for proceeding with it immediately. We beg to enclose you supplementary reports from the inspector and captain, likewise the inspectors report for the month of February, which was not received in time to forward in due course, and it will afford you much satisfaction to find that Mr. A. Hallett, the bearer of this despatch, will be enabled to explain to you our prospects far better than writing can do.

EAST GODOLPHIN MINING COMPANY.

At a general meeting of adventurers, held at the mine, on the 2d inst., the accounts were examined and passed, showing—Labour cost, Jan., 124*l.* 9s. 4d.; Feb., 104*l.* 12s. 9d.; March, 115*l.* 16s. 2d.; April, 94*l.* 11s. 7d.; May, 102*l.* 0s. 7d.; June, 87*l.* 6s.; merchants' bills, Jan., 63*l.* 3s. 4d.; Feb., 72*l.* 1s. 7d.; March, 24*l.* 4s.; April, 36*l.* 2s. 6d.; May, 46*l.* 14s. 9d.; June, 45*l.* 6s. 10d.—together, 916*l.* 9s. 5d.—By balance in hand last account, 284*l.* 7s. 1d.: showing balance against the mine, 632*l.* 2s. 4d. A call of 3*l.* per share was made, which will produce 768*l.* The following report, from Mr. Wm. Vawdrey (purser), and Capts. Eustice and Truran was read:—

August 2.—The ground opened since the commencement of operations consists of the following shafts and levels—viz.: In the flat-rod shaft, on caunter lode, sump shaft sunk 31 fms. 0 ft. 10 in.; 15 fm. level east driven 39 fms. 5 ft. 10 in.; ditto west driven 54 fms. 2 ft. 9 in.; ditto east rising 14 fms.; 25 fm. level west driven 30 fms. 1 ft. 6 in.=169 fms. 4 ft. 11 in.—In the engine-shaft, on Gwedna lode, adit level, cross-cut north, 19 fms. 3 ft.; ditto, winze on lode, 10 fms. 2 ft. 6 in.; engine-shaft sunk 39 fms. 1 ft.; 10 fm. level, cross-cut north, 14 fms. 1 ft. 6 in.; 20 fm. level, cross-cut south, 13 fms. 5 in.; 20 fm. level east, driven 7 fms. 5 ft; 20 fm. level west, driven 8 fms. 5 ft.=113 fms. 5 ft.—Total ground opened, 283 fms. 3 ft. 11 in. The flat-rod shaft has not answered our expectations with an increase of depth; the lode is a strong caunter, composed of spar, flookan, jack, and mundic, in a black killas country. As we extended the levels west we were expecting a change of ground; but the desired alteration of strata has not presented itself. A few fathoms behind the 25 fm. level end west some good stones of ore were met with in a lode about 2 ft. wide, but the improvement is not progressive. The sinking of the engine-shaft has been very much impeded by a hard floor of ground; at present the bottom of the shaft is in a fairer country, going down with six men, at 9*l.* per fm., and is now 6 fms. below the 20. The cross-cut south, in the 20 fm. level, intersected the lode 13 fms. 5 ft. from the engine-shaft; in the next level, the 30, looking at its present underlie, will be found 8 fms. south from the shaft. The lode in the 20 fm. level is of a very kindly character, yielding stones of rich lead and copper, and upwards of 2 ft. in width. The western end is in about 10 fms., fast approaching ground which, at and below the adit level to about 10 fms. in depth, formerly yielded copper ore of a very rich quality. In about six weeks from this time we shall have drained all the ground from the adit to our present 20 fm. level, which, from the evidence exhibited at the deep adit, will yield pitches for several pares of men on a moderate tribute. From the engine shaft to the great flookan west is about 150 fms.; this flookan underlies west very fast, consequently as our levels increase in depth, so will our workings lengthen before reaching it, and which, in its progress south, has yielded large quantities of mineral from lodes intersected by it. The mine is working on the most economical scale, and we feel well assured that, within six weeks from this date, we shall reach profitable tribute ground; and before three months have elapsed we shall be in a position to speak with confidence as to future success.

EAST TAMAR CONSOLS MINING COMPANY.

At the two-monthly meeting of adventurers, held at the offices of the company, Threadneedle-street, on Tuesday, the 6th inst., the accounts were examined and passed, showing—Balance last account, 669*l.* 13s. 1d.; silver-lead ores sold, 1034*l.* 18s. 10d.; fluor-spar, at 5s. 6d. per ton, 26*l.* 11s. 5d.; calls, 100*l.* 16s. = 1831*l.* 19s. 4d.—Mine cost for May, 669*l.* 9s. 8d.; ditto for June, 591*l.* 10s. 1d.; London expenses three months, 30*l.* 18s.; discount, 3*l.* 4s. 7d.: leaving balance in favour of company, 536*l.* 17s.; with an estimated account of receipts and payments up to next meeting, 13th Oct., showing balance of payments over receipts of 537*l.* 0s. 10d.; and also a statement of assets and liabilities, showing balance in favour of the mine of 1216*l.* 17s. 2d.—A letter having been read from Messrs. Newton, Keates, and Co., of Liverpool, requesting permission to cancel a tender for 65 tons of silver-lead ore, being for 16*l.* 12s. per ton, instead of 12*l.* 16s. as it was intended; it was resolved, that they be permitted to amend the alleged error by substituting 13*l.* for 16*l.* 12s., and if such offer be declined, the latter sum to be insisted on. Propositions relative to working a part of this mine with the South Tamar were laid before the meeting, and unanimously adopted.

A report from Mr. J. Wolferstan, dated July 30, was then read (which was inserted in last week's Journal), as also the following:—

August 5.—Since my report of last week, the lode in the 21 fm. level (under the deep adit) has much improved in size and productiveness; it is now worth 14 cwts. per fm. The 70, north of Furze-hill, is also better for ore, and opening good profitable ground. In the 26 fm. level, south of Church-lane shaft, we have got in 90 fms., and find a considerable part of the lode standing in the back of the level, that will come away at a moderate tribute. The level, however, is not yet cleared and secured to this extent, but will be so by the end of the month, and then we shall be able to set several extra pitches. In the other parts of the mine there is no alteration to notice.

EAST WHEAL FRANCES (LATE WHEAL ALBERT).

At a meeting of adventurers, held at Tyack's Hotel, Camborne, on 31st of July, it was resolved that, in consequence of another mine having previously been named Wheal Albert, this mine be in future called East Wheal Frances; that it be divided into 256 shares; that the lodes opened on, having presented promising appearances, be prosecuted with vigour; that general meetings be held every two months, and that 10 days' notice be given of such meetings, and 14 days' notice of special ones; that transfers of shares be made at general meetings, and that none be so made unless all calls are paid; that all calls be paid within one calender month; and that shares be forfeited if not paid in two months.—A call of 30s. a share was made.—Capt. Nicholas Tredinnick was appointed manager, at a salary of 2*l.* 2s. a month.—Mr. T. Tredinnick was appointed purser at a like salary; and Capt. W. Knuckey was appointed working agent, at a salary of 4*l.* per month.

MINERAL COURT MINING COMPANY.

At a meeting of adventurers, held at the mine, on the 1st inst., the accounts showed—Balance last account, 428*l.* 12s. 2d.; costs for nine months ending June 30, 2954*l.* 13s. 3d. = 3383*l.* 5s. 5d.—By calls, 748*l.*; reserved shares allotted, 96*l.*; material sold, 34*l.* 10s.; tin sold from Feb. 2 to July 31 (less dues, 40*l.* 11s. 10d.), 690*l.* 1s. 3d.: leaving balance against the mine, 1814*l.* 13s. 5d.; to which add due Mr. Burmester, 300*l.*—making the amount to be provided for, 2114*l.* 13s. 5d.—A call of 5*l.* per share was made, and the purser's salary was raised to 6*l.* 6s. per month, to compensate for the extra time devoted to his duties.—A report from the purser was read, explaining the above expenditure, the erection of engine, stamps, &c., and the present state of the mine, which was satisfactory, and the following from Capts. Dale, Evans, and Webb:

August 1.—I beg to report to you the present condition of the mine, and our operations since the last account. We have sunk a new shaft about 50 fathoms east of the engine-shaft on the course of the lode, and communicated it to the 8 fm. level. We have extended the adit level 35 fms. east of this shaft, and we have worked several pitches and broke some rich tin work from the backs of this level—the present end is poor. The 8 fm. level has been driven 9 fms. 2 ft. east in a tinny lode; this end is now suspended, as it gives too shallow a back, and we are driving on the 20 fm. level, to communicate from it direct to the adit level, so as to have but one back between them. The 20 fm. level is now extended 35 fms. east, and 30 fms. 3 ft. west, on a air tinny lode—its size will average about 4 ft. 6 in. wide. The tributers are principally raising our tin from the backs of this level. In the 30 fm. level there is a good lode opened on for 12 fms.—its size is about 4 ft.; in this level we have met with strings or droppers of tin in the decomposed granite outside the lode—this I consider indicative of something more valuable in depth. We are in a very different position from our last account, and we have found the lode to be more productive as we have opened upon it in depth. I would recommend that the engine-shaft be sunk to a 40 fm. level when convenient, and the lode might be cut at that depth in three months. From present indications, I am persuaded the mine will make one of long standing, and ultimately yield good profits. Our outlay about the steam stamps has been great, but that expense is past, and even with the extended operations proposed, the monthly expenditure will be lessened. As the 20 fm. end west is now getting near where the footway shaft will be communicated to it, and the level requires ventilation, I also would advise that shaft to be continued down to the 20 fm. level as speedily as possible, which will enable us to increase our monthly returns.—J. Dale.

August 1.—Having been called on to-day to inspect this mine, we hereby hand you the following report:—We find an increased length of tin ground in the 20 fm. level to what was found in the levels above, and from what may be seen in the adit level to the west, we are persuaded there remains much tin ground still before the west end of the 20 fm. level. The 30 fm. level has been extended on the lode about 12 fms., and it affords us pleasure to say there is an improvement to what was found in the 20, immediately over the ground now opened in the 30. The soft decomposed granite is still accompanying the lode, which gives it a pleasing feature, as this softness is congenial for tin. It is our opinion that the productiveness of the lode will increase as it is prosecuted in depth; therefore, we recommend sinking the engine-shaft as soon as convenient, and extending the levels east and west, especially west, where we consider will be found the most productive part of the mine.—James Evans; John Webb.

SOUTH TOLGUS MINING COMPANY.

The two-monthly meeting of adventurers was held at the mine on Wednesday, the 7th inst., when the accounts were presented, showing—By two months' ore money (less dues), 1232*l.* 7s. 3d.—Cost for May, 402*l.* 1s. 4d.; June ditto, 436*l.* 16s. 4d.; merchants' bills, &c., 194*l.* 8s. 9d. = 1038*l.* 6s. 5d.: showing a profit of 199*l.* 0s. 10d.; add balance from last account, 766*l.* 18s. 7d. = 965*l.* 19s. 5d.—By dividend of 2*l.* 10s. per share, 640*l.*: leaving balance now in hand, 325*l.* 19s. 5d.—The following report was presented to the meeting:—

Aug. 7.—The 54 fm. level is driving north in a good channel of ground; 2 or 3 fms. more to drive to cut the north lode; in the 54 east, on the south lode, for the last 2 or 3 fms., the lode has produced half a ton per fm. of good ore, and is very kindly. We have set the men to rise to the 42, which we hope they will complete in this month; this will lay open some ore ground, which can be taken away to good advantage; the 42 east, on the south lode, has been kindly, but has not produced much ore during the last two months; the lode in the present end, and for the last 2 fms., has improved, and we have set the men to rise to the 32; we hope to complete this rise also in the present month, which will give such ventilation as will enable us to work the ore ground, which we passed through for 20 fms. in length, before the last two months; the 42 west, on the north lode, is coming under where we first met with ore in the 32; but if the ore continues its usual dip, we shall have to drive several fathoms before we meet with it in the 42; the lode has, however, very much improved lately in size, and is composed of a kindly spar, letting down a great deal more water than hitherto. The 32 west, on the north lode, has continued to lay open ore ground; but, for some fathoms during last month, it was comparatively poor; we are happy to say it is now again producing 1½ ton of ore per fathom, and looking very promising. The 22 west, on the north lode, also has continued to produce some ore, varying from 1 ton to ½ ton per fathom; the lode is now 18 in. wide, containing good stones of ore; the two levels last described are advancing fast towards Rodd's shaft; and we hope, in about two months, to effect a communica-

tion with the winze sunk under the adit east of that shaft, which will relieve all the western part of our mine in respect to ventilation; the winze is down 11 fms. below the adit; the lode has been moderately productive, averaging ½ ton per fathom, and is now looking very kindly. We have driven the 12 fm. level 16 fms. east and 4 fms. west from a cross-cut, driven south from the north lode, near new shaft, on a branch, or lode, about 9 fms. south of our south lode. The whole of the ground thus laid open is productive—the 16 fms. east of the cross-cut, having yielded, on an average, 1¼ ton per fathom; the lode in the present end appears to be keeping off from our other lodes in going eastward, and is now yielding 2 tons of ore per fm. This seems likely to prove a very valuable addition to our previous discoveries, and we have started two cross-cuts in the 22, in order to cut this lode, east and west of the place where we have seen it in the 12; we have also started another cross-cut in the 12 fm. level, which will meet the end driving east on the lode, and give us such ventilation as will enable us to open ground upon it speedily; we hope to cut this lode, which we have named Youren's lode, in the three new cross-cuts, within the present month; the adit and 12 fm. level, east on the south lode, are stopped until we can hole a rise and winze for air. Our discoveries of ore have continued to exceed considerably the quantity we have taken away up to the present time; and, as our prospects are now better than they have been for some time past, we shall feel justified in increasing our returns, for which our machinery will afford us every facility.

MINING COMPANY OF WALES.

A preliminary meeting of gentlemen interested in this undertaking took place at the offices, Lincoln's-inn-fields, yesterday, the 9th inst., when, after reading several letters from applicants for shares (some for a large number), and some letters requesting further information on statistical details, it was resolved that the meeting be adjourned to the 25th inst., at the same hour. A letter from one of the proprietors of the mines and quarries placed at the disposal of the company, requested the secretary to apologise for his non-attendance on this occasion, owing to severe and rather sudden illness, and to promise on his behalf that everything he could do to advance the interests of the company, and to meet their wishes, should be done. The other chief proprietor then present proposed to act in like manner.—Some desultory conversation occurred on the rules proposed, and other matters relative to the guidance and constitution of the company, and the best mode of carrying out the company's views for the general interest; but, finally, it was concluded that those points should be left for the discussion of shareholders at the next meeting. —The SECRETARY mentioned that the reports, &c., of the Cardigan Mines, alluded to in an article in one of our late Numbers, were not fully completed; but that the value of the mines, in as far as best productive indications promised, was of high estimation, and that he was assured these reports, sections, &c., would be ready in a week or 10 days. He also laid before the gentlemen present a memorandum of agreement entered on by him on the part of the company, on most advantageous terms, of a lead mine in the heart of the famous Llangynog mining district, through which the best lodes of that district run. The very promising mines now in trial of Aber Hernant, the estate of Henry Richardson, Esq., of Merionethshire, are in the immediate vicinity of Llangynog, and are also likely to be placed under the company's immediate superintendence.—The meeting then adjourned.

NORTH WHEAL FRIENDSHIP MINING COMPANY.

At a general meeting of adventurers, held at the offices, Tavistock, on the 1st inst., Sir ANTHONY BULLER in the chair—the accounts were examined and passed, showing—Labour cost for Feb., 97*l.* 7s. 4d.; March, 110*l.* 1s. 5d.; April, 131*l.* 14s. 6d.; May, 169*l.* 3s.; June, 187*l.* 13s. 2d.; law charges, 201*l.*; merchants' bills, 188*l.* 19s. 3d.; lord's dues, 29*l.* 15s. 5d.=1115*l.* 14s. 1d.—By balance last acount, 126*l.* 17s. 9d.; call, 512*l.*; ores sold, 342*l.* 14s.; leaving balance against the adventurers, 134*l.* 2s. 4d. A call of 5s. per share was made, and the meeting was adjourned to 22d inst., to learn the result of continuing the cross-cut at Buller's shaft and the 30 fm. level.

The following report, from Capt. Barratt, the agent, was then read:—

August 1.—Since the last meeting of adventurers, Buller's engine-shaft has been sunk to the 40 fm. level, the lode, during this sinking, has been composed principally of flookan, spar, mundic, and some portion of quartz, with scarcely any change in its appearance for the last 20 fms. sinking. A cross-course has been driven south from the present bottom of the said shaft 6 fms., through a body of mundic, flookan, and patches of capels, for the greater part of the driving. The present end shows a more regular stratified ground, of a very dark colour. On again surveying the 30 fm. level, west from engine-shaft, yesterday, I was very much struck with the appearance of the mineral water issuing from the south part of the end; and to my surprise, on taking down the south side of the level, good stones of lead ores were discovered, with beautiful greens, and portions of black copper ore—specimens of which I beg to lay before you. At Wheal Betsy, the rise in the back of the deep adit has been communicated to the 24 fm. level, which proves to be on a lode standing about 10 ft. to the west of the old workings. An end has been driven north and south at this level, where some tributer ground has been laid open on the back, and two pitches are now set there, at 8s. 6d. and 9s. 6d. in the *l.* respectively. In the 32 fm. level we are driving north and south from this rise; the end north, about 6 fms., through some good bunches of lead—the present end producing about half a ton per fm. The south end has been driven about 9 fms., and through the greater part of this distance tribute ground has been laid open. The 32 fm. level has been driven north from the south, or boundary, rise about 16 fms.; and in driving this level we have passed through several bunches of lead. The present end shows good appearances, producing about half a ton of lead per fathom. Two pitches are at work in this part, at 7s. 6d. and 8s. 6d. respectively. A grinder has been erected, with drawing machine attached, which has incurred an expense of upwards of 100*l.*: 30 tons of lead ores have been sampled since the last meeting, and there are now on the mine about 10 tons dressed up, ready for sale.

SOUTH TAMAR CONSOLS MINING COMPANY.

At a two-monthly general meeting of adventurers, held at the offices, Threadneedle-street, on Tuesday, the 6th instant, the accounts were examined and passed, showing—Balance from last account, 165*l.* 2s. 3d.; silver lead ores sold (19*l.* 5s. 6d. per ton), 1389*l.* 17s. 3d.; fluor-spar (5s. 6d. per ton), 27*l.* 10s. = 1582*l.* 9s. 6d.—By costs and merchants' bills for May, 644*l.* 10s.; ditto June, 592*l.* 4s. 4d.; proportion of materials for Gullett's shaft, 72*l.* 3s. 7d.; London expenses for three months, 29*l.* 1s. 6d.; discount, 3*l.* 17s. 9d.: leaving balance in hand, 240*l.* 12s. 4d.—An estimated statement was also presented of the receipts and expenditure up to the next meeting, Oct. 8, showing a balance of payments over receipts of 276*l.* 6s. 10d.—A statement of assets and liabilities showed, balance in favour of the mine, 1550*l.* 7s. 2d.—The secretary reported that Messrs. Locke, Blackett, and Co.'s tender for 76 tons 6 cwts. of silver-lead ore, of 13*l.* 17s. 6d. per ton, being the highest, and Mr. John Hodges's tender of 780*l.*, for the erection of a stamping-engine, had been accepted, and the proposition for working part of the mine with East Tamar was adopted.

A report from Mr. J. Wolferstan, dated July 30, was then read (which was inserted in last week's Journal), as also the following:—

August 5.—We have no particular alteration at the mine since my last report; at the same time, I have the satisfaction of being able to state that the bottom levels continue to be equally productive as they were, and, from present appearances, are more likely to improve than otherwise. We shall sample about the 16th inst., and I fully calculate on having 80 tons. The next succeeding sampling will, I believe, be about 90 tons.

WHEAL BASSET MINING COMPANY.

At the two-monthly meeting of adventurers, held at the mine on the 6th inst., the accounts were examined and passed, showing—Copper ores sold, less dues (369*l.* 14s. 6d.), 5176*l.* 4s. 2d.; materials ditto, 19*l.* 19s. 4d.=5196*l.* 3s. 6d. —By labour cost, May & June, 2059*l.* 17s. 10d.; merchants' bills, 569*l.* 13s. 11d. —leaving balance in favour of the mine, 2566*l.* 11s. 9d.; to which add balance last account, 500*l.* 19s. = 3067*l.* 10s. 9d.; from which deduct dividend of 10*l.* per share, 2560*l.*—leaves in hand, 507*l.* 10s. 9d.

The following report was read to the meeting:—

August 6.—In reporting upon this mine for the two-monthly meeting, we are happy to state that we cut a lode on the 17th June last, which was intersected 32 fms. north of the great lode in the 70 fm. level, by a cross-cut driven north on Thesker's cross-course. The east end is driven 6 fms., and the west end 5 fms., on a lode varying from 18 in. to 2 ft. wide, and producing 4 tons of ore per fm., worth 30*l.* The ends at present are not quite so good as they have been, but still are very promising. We are driving the 40, 60, and 80 fathom levels north, to intersect the said lode, which we expect to cut in the 40 fathom level in about a month; but we do not expect to cut this lode in the 60 and 80 fm. levels in less than three or four months. We are driving several cross-cuts south at various levels, but have not made any discovery of late; nor is there any particular alteration in the lodes generally, except Williams's south lode, in which, during the last two months, the levels have not been discovering as much ore as they were a few months since.

WHEAL HARRIET MINING COMPANY.

At a general meeting of adventurers, held at Tyack's Hotel, Camborne, the accounts were examined and passed, showing—Call, 512*l.*—By labour cost for May, 24*l.* 17s. 8d.,; ditto June, 29*l.* 6s. 5d.; merchants' bills, 138*l.* 0s. 10d.: leaving balance in hand, 319*l.* 15s. 1d.—It was resolved, that any calls remaining unpaid for two months after becoming due, the shares should be forfeited; that a draft of a lease from Lady Basset having been laid on the table, the same be referred to Messrs. N. Tredinnick, J. Rule, and T. Davey, and that they be empowered to act for the shareholders; that general meetings be held every two months, and special meetings to be called on requisition of holders of one-fifth of the mine, and that 10 days notice be given of each; that no holder be represented by proxy, unless such proxy be entitled to vote in his own right; that no new mines be taken without consent of a special meeting; that the mine be divided into 2560 shares; that a list of shareholders be placed in the cost-book every two months; that transfers be specified at all general meetings; and that Messrs. Lanyon and Vincent be appointed surgeons to the mine —A call of 8*l.* per share was made, payable in four instalments of 2*l.* each, on Sept. 30, Nov. 30, Jan. 31, and March 21.

WHEAL HENNOCK MINING COMPANY.

At the two-monthly meeting of adventurers, held at the offices, Winchester-buildings, on Monday last, the 5th inst.,—JAMES FORSYTH, Esq., in the chair, —the accounts were examined and passed, showing—Receipts, 253*l.*; expenditure, 302*l.*—leaving a balance against the mine of 85*l.*—It was resolved, that the reports of Messrs. E. Hopkins and A. Murray, jun., were highly satisfactory, and confirmatory of the opinions entertained from the commencement, that Hennock would prove a profitable undertaking; that Capt. James be instructed to sink to the 20 fm. level without delay, as originally proposed by him, and advised by Messrs. Hopkins and Murray; that the shares upon which the calls have not been paid be placed at the disposal of the directors; and that all shares upon which the call made remained unpaid after due be sold to meet the arrears thereon.—A call of 14s. per share was made, 4s. payable on the 15th inst., 5s. the 5th Sept., and 5s. the 5th Oct.—Thanks having been voted to the chairman and secretary, the meeting separated.

WHEAL TREFUSIS MINING COMPANY.

At a general meeting of adventurers, held at the mine on the 31st July, the accounts were examined and passed, showing—Labour cost, March, 97*l.* 18s. 8d.; April, 80*l.* 16s. 11d.; May, 95*l.* 7s. 9d.; June, 132*l.* 0s. 2d.; merchants' bills (including 30-inch engine and boiler), 833*l.* 7s. 2d. = 1151*l.* 10s. 8d.—By call, 512*l.*; arrears, 8*l.*—leaving balance against the adventurers, 647*l.* 10s. 8d.; to liquidate which a call of 25s. 3d. per share was made.—Capt. Z. Carkeek was appointed agent, in the room of Capt. E. Johns, resigned. Mr. John Garby was appointed clerk, at a salary of 2*l.* 2s. per month.

Capt. Thos. Richards, in his report, stated that the present operations are confined to two points—namely, sinking the engine-shaft below the 14 fathom level (north of the lode, which is expected to underlie into the shaft about 26 or 30 fms. below the adit), and driving the level east in the lode, which is improving in appearance; but, being surrounded by old and new mines, which have been and are highly profitable, the locality was evidently rich, and he expected profitable results; also that the monthly expenditure from the present would probably not exceed 100*l.* per month.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 8 per Cent., 212½ 11½	Belgian, 4½ per Cent., 99½
3 per Cent. Reduced Ann., 97⅞ ½	Dutch, 2½ per Cent., 57⅝
3 per Cent. Consols Ann., 96⅝ ⅞ ⅞ ⅝	Brazilian, 5 per Cent., 92½
3½ per Cent. Ann., 99½ ⅝ ½	Chilian, 3 per Cent., 62½
Long Annuities, 8½	Mexican 5 per Cent., ex Coup., 29½ 30
India Stock, 10½ per Cent., 269 70	Russian, 5 per Cent., 112½ 12
3 per Cent. Con. for 14th Aug. 96⅝ ⅝	Spanish, 5 per Cent, 17½
Exchcq. Bills, 1000*l.*, 1½d. 69 66s pm.	Ditto 3 per Cent., 37⅛

MINES.—During the past week there has been a large amount of business transacted, but principally amongst the leading mines—such as Devon Great Consols, South Basset, Levant, Condurrow, Tresavean, Trelawny, Mary Ann, &c.; the latter has much improved.

Holmbush is reported to be much improved. The old Holmbush lode, in the 132 fm. level, is turning out from 3 to 4 tons of ore per fm., which will realise about 35*l.*

Tincroft is still looking remarkably well.

The last sale of ore from Herodsfoot Mine, amounting to seventy tons, realised 11*l.* 13s. 6d. per ton.

On the 6th inst. at Trelawny the last month's ores were sampled, amounting to 100 tons crop ore, and 36 tons No. 2.

The Levant Mine continues to look well, and holds out good prospects. A dividend of 800*l.* will be declared at the meeting on Tuesday next.

Wheal Reeth continues to give encouraging indications.

We have been advised of a discovery of importance at Wheal Hamlyn, in Devonshire, where a lode of extraordinary size, and most interesting to the mineralogist, has been discovered. Our informant states it to be the largest ever cut in England, being 30 ft. wide, and composed of malleable copper, greens, sugary spar, soft gossan, prian, and mundic. A shaft has been sunk through it 10 fms., where it is greatly improved.

The portion of the great adit in the Minera Mines remaining to be completed (700 yards) has been taken by contract, to be finished in 15 months. Sinking the engine and other shafts, and the erection of the necessary buildings were progressing favourably.

In Wheal Trescoll we understand that the lodes are still improving both east and west; it is proposed to sink immediately to the 30, as the ore evidently gets richer in depth.

The report from Bodmin Consols is very satisfactory: the indications presented in driving the north adit, lead to the conclusion that a favourable result may be soon expected. In a winze, north of engine-shaft, there is a most promising lode, 3 to 4 feet wide, producing good work in lead. On the whole, the mine looks well.

The operations at Wheal Crebor continue very satisfactory; about 7 tons of copper ore are at grass; and the tributers who are breaking some orey work are likely to raise a fair sampling this take. The 12 fm. level, on the south branch, is producing some good stones of ore; and, as the driving nears the cross-course, it is expected an improvement will take place. The agent considers it probable that he shall be able to sample several tons every two months, to assist in exploring the new ground and parallel lodes.

By our accounts from Wales, we learn that in the Daren Mine a good course of ore has been discovered in the past week, in the new adit driving under the whole workings westward. In the Bwlch Consols the 45 fathom cross-cut has touched the lode, which yields about 40*l.* worth of ore to the fathom. At Allt-y-Crib a course of ore has been discovered by the side of the old workings, from 3 to 4 ft. wide, continuing through the mine. At Cwmystwith, the levels show some improvements since our last; the pitches remain much the same, and the next sampling would be completed in a few days.

At the Wheal Basset meeting, the accounts showed—Returns from copper ore sold, less dues, 5176*l.* 4s. 2d.; and, after defraying all mine costs, leaving a balance in hand, after paying 2560*l.* as dividend of 10*l.* per share, of 507*l.* 10s. 9d.

At the meeting of South Tolgus adventurers, held at the mine, on the 7th inst., the accounts showed the sales of ore to have realised (less dues) 1232*l.* 7s. 3d.; mine costs and merchants' bills, 1033*l.* 6s. 5d.: showing profit of 199*l.* 0s. 10s.; add balance from last account, 766*l.* 18s. 7d. = 965*l.* 19s. 5d.—A dividend of 2*l.* 10s. per share was declared, leaving balance in hand, 325*l.* 19s. 5d.

At the East Tamar meeting, the accounts showed—Silver-lead ores sold, 1034*l.* 18s. 10d., with a balance in favour of the company of 536*l.* 17s.; also an estimate for the current two months, showing balance against the mine on the 13th Oct., 537*l.* 0s. 10d.; also a statement, showing surplus of assets over liabilities, 1216*l.* 17s. 2d.—The lodes in the 21 and the 70 fm. levels, at Furze-hill, had improved, and in the latter several pitches would be set by the end of the month.

At the South Tamar meeting, the accounts showed—Silver-lead ores sold, 1389*l.* 17s. 3d., and a balance in hand, 240*l.* 12s. 4d.; also an estimate for the current two months, showing 276*l.* 6s. 10d. against the mine; and a statement showing surplus of assets over liabilities, 1550*l.* 7s, 2d. A tender for the erection of a stamping-engine for 780*l.* had been accepted. In the mine no particular alteration had taken place.

At the East Godolphin meeting, the accounts showed a balance against the mine of 632*l.* 2s. 4d. A call of 3*l.* per share was made, which will produce 768*l.* The workings in the mine exhibited promising indications, and the agent confidently expects profitable results within six weeks from the date of his report.

At the East Wheal Frances meeting, it was resolved to divide the mine into 256 shares; and as the lodes opened on were highly promising, a call of 30s. per share was made, for the purpose of prosecuting the mine.

At the Wheal Harriet meeting, the accounts showed a balance in hand of 319*l.* 15s. 1d. A draft lease from Lady Basset was presented, and left for consideration. The mine was divided into 2560 shares, and a call of 8*l.* per share was made, payable in four instalments.

At the Wheal Hennock meeting, the accounts showed—Receipts, 253*l.*; expenditure, 302*l.*; leaving balance against the mine, 85*l.* The agent was instructed to sink to the 20 fm. level without delay, and a call of 14s per share was made,

At the Wheal Trefusis meeting, the accounts showed a balance against the mine of 647*l.* 10s. 8d. A call of 25s. 3d. per share was made. Capt. Richards, in his report, expressed his confident opinion that the adventurers would obtain profitable results from the mine.

At the Mineral Court meeting, the accounts showed—Tin ores sold, 690*l.* 1s. 3d., and a balance against the mine, 2114*l.* 13s. 5d. A call of 5*l.* per share was made. From the reports, it appears there is every reason to hope the lodes will improve in depth, and it is recommended to continue sinking the engine-shaft with all possible speed.

At the Mining Company of Wales meeting, several letters were read from parties requiring shares, some of them for considerable numbers; in consequence, however, of the illness of one of the principal promoters, the meeting was adjourned to the 23d inst.

At the West Wheal Seton meeting, the accounts showed—Balance last account, 166*l.* 19s. 5d.; costs, 905*l.* 5s. 2d.= 1072*l.* 4s. 7d.—By ores sold, 429*l.* 11s. 4d.; call, 400*l.*: leaving balance against the mine, 242*l.* 13s. 3d.

At the Wheal Conqueror meeting, it was determined to abandon the mine, but a new company is expected to be formed.

At the Old Brimpts meeting, the accounts showed that the outlay had not exceeded 150*l.*, and tin to that amount had been raised. It was decided to cut a leat, and erect machinery immediately; and it is expected that, by next meeting, a large quantity of mineral will be prepared for market. The lode is from 1½ to 2½ ft. wide, tinny throughout, and as the men drive the richer it gets. A large quantity of stuff is broken underground, and as soon as stamps are erected a dividend is expected.

At the Wheal Mary Emma (Lidford) meeting, on Monday, the report of the present prospects led to the conclusion that the present operations would leave a sufficient profit to lay open the mine without another call.

At the North Wheal Friendship meeting, the accounts showed—Call, 512*l.*; ore sold, 372*l.* 14s.; and a balance against the mine, 134*l.* 2s. 4d.—Since the last meeting, the shaft had been sunk to the 40 fm. level without much change in the last 20 fms. In the 30 good stones of lead ore, and portions of black copper ore, with beautiful greens, have been discovered.

At the West Downs meeting, at Tavistock, on Monday, a call of 10s. per share was made, for the erection of a steam-engine.

At the East Wheal Josiah meeting, at Tavistock, on Tuesday, a call of 2s. 6d. per share was made.

The accounts of Wheal Friendship for the two months to end of June have been closed, and we understand that a dividend will be declared at the next meeting; the profit in that period was 500*l.*, and the ore sampled for next sale is 208 tons.

Shares in the following mines have changed hands during the week:—Devon Great Consols, South Basset, South Tolgus, Levant, Tresavean, Condurrow, Trelawny, Mary Ann, Alfred Consols, Tremayne, Lewis, Daren, Tincroft, Bedford United, Tregorden, Callington, South Carn Brea, South Plain Wood, Drake Walls, Trefusis, Venton, Treleigh Consols, Wheal Crebor, Wheal Langford, Pennant and Craigwen, Wheal May, Moditonham, &c.

In Foreign Mines transactions in the following shares have taken place:—St. John del Rey, United Mexican, Copiapo, Santiago, Linares, Cobre, Australian, Imperial Brazilian, General Mining, North British Australasian, &c.

Despatches have been received from the Worthing Mining Company, South Australia, but they are of an earlier date than the information we gave last week. A place had been fixed on for the engine-house near a part of the lode, 3 to 4 ft. wide, showing copper ore and gossan for 15 fms. in length, and the several lodes opened on showed copper at 8 fms. depth.

Advices from Copiapo have been received. In the Checo Mine, the lode in Harman's shaft was still large, with a branch of good ore, 18 in. wide. San Pedro was not quite so rich as it had been. In La Compania, they had a large lode, with a good branch of ore, 1 ft. wide; and in La Reyna a large lode had been cut, which was expected to give large and rich deposits of ore. The produce for April was 64 tons. In the silver mines, improvements had taken place. At Al Fin Hallada, the ore produced from 200 to 300 marcs per cajon, and the others were favourable. In the gold mines, no change of importance had taken place.

From the Imperial Brazilian the returns only have been received, which were from May 23 to June 2—Gongo, 1 lb. 7 ozs. 8 dwts.; Bananal, 11 lbs. 10 ozs. 13 dwts.=13 lbs. 5 ozs. 11 dwts. Total from Jan. 1 to June 2—Gongo, 80 lbs. 8 ozs. 1 dwt.; Bananal, 138 lbs. 0 ozs. 19 dwts.; together, 188 lbs. 9 ozs.

At the Linares Mines, the tribute pitches were looking well, and progress was being made in sinking and driving. The quantity of ore raised and dressed in July was 93 tons. Five miners from Guadalcanal had been taken on. The total ore in stock was 166¾ tons.

There is little in the National Brazilian advices except the returns, which are—Cocaes, 1 mc. 2 ozs. 6 oits. 41 grs.; Cuiaba, 1 mc. 3 ozs. 6 oits. 51 grs. =2 mcs. 6 ozs. 5 oits. 20 grs.

At St. John del Rey, the gold extracted to May 28 was 13,533 oits., the result of 20 days' stamping, or 15·27 oits. per cubic foot.

In the St. Juan de Cuba, the main lode had been disordered by slides; but at the 3 fms. below the 10 fm. level it had again appeared, 6 ft. wide, and worth 10 tons of ore per fm.

We have received the half-yearly report of the directors of the Scottish Australian Investment Company, dated Aberdeen, July 26, in which they state, that the affairs of the company have progressed satisfactorily, and the profits amounted to about the same as in the preceding half-year; the same dividend will, therefore, be paid, and about the same sum carried to the reserve fund as then. A report from Capt. Thomas Burr, founded on a careful survey of the Bon Accord property, jointly held by this company and the North British Australasian Company, states that there is every appearance that this mine, with proper working, will turn out as much ore as the Burra Burra, but from the difference in the lodes no ore will be raised above the water level, and an engine must, therefore, be erected. In pursuance of this recommendation, Capt. Dalley has been dispatched to Australia, and an engine has been constructed under his direction. The expenses will be confined as narrowly as possible, consistent with a fair trial. From the statement of accounts, it appears that the profit amounted to 2300*l.* 19s. 7d., from which a dividend of 6 per cent. clear of income tax, had been declared: leaving 241*l.* 15s. 7d. to be carried to the reserve fund, which then would amount to 1781*l.* 2s. 6d.

Considerable excitement prevails in the metal trade, in consequence of the extraordinary price obtained at the Dutch sale of 117,766 slabs of Banca tin at Amsterdam, on the 6th inst. The sum realised was 20 per cent. over the sales of last year. The large Dutch houses were the principal buyers, at 50¼ florins, to the exclusion of the English, French, and American houses, who offered 43 to 46 florins. The price of English tin is expected to advance 5*l.* per ton.

The Liverpool Imports of Ores and Metals for the week ending 6th of August were—

1160 cwts. copper, from Valparaiso.	24 casks black oxide of manganese, from Rotterdam.
11 casks yellow metal, from Baltimore.	826 pigs lead, from Malaga.
100 barrels chromate of iron, from ditto.	1748 bars iron, from St. Petersburgh.
1140 plates zinc, from Rotterdam.	50 tons ditto, from Cronstadt.
140 tons black oxide of manganese, from Rotterdam.	

The London Imports of Ores and Metals for last week were—

2043 bars lead, from Carthagena and Sines.	15 casks zinc, from Antwerp.
4404 ditto, from Carthagena and Faro.	40 boxes antimony ore, from Operio.
328 ditto, from Gibraltar and Cadiz.	2041 bars iron, from Sundswall.
910 slabs tin, from Penang.	2112 ditto, from Norkoping.
107 slabs copper, from Rotterdam.	1492 bags copper ore, from Port Adelaide.
2381 bars iron, from St. Petersburgh.	7 packages specie, from New York.
40 casks nails, from Antwerp.	

From the accounts relating to Trade and Navigation, for the month ended 5th July, 1850, and the six months ended 5th July, 1850, we subjoin the monthly and half-yearly importations of Ores and Metals, and the quantities entered for home consumption:—

Importations of	Month ended July 5. 1848.	1849.	1850.	Six Months ended July 5. 1848.	1849.	1850.
Copper ore ....*Tons*	5966	3285	4281	26492	25938	22478
Copper .....*Cwts.*	2607	5735	6083	5580	15334	56748
Iron .....*Tons*	2784	1914	2147	6239	6516	4808
Steel..... ,,	45	130	1	188	336	27
Lead..... ,,	553	1000	938	1543	2841	4803
Spelter..... ,,	1772	1112	1901	5054	5370	6834
Tin .....*Cwts*	291	2050	2205	1349	6690	9690
Quicksilver....*Lbs.*	—	334549	7472	402463	969338	176819

Quantities entered for home consumption:—

Copper ore ....*Tons*	7464	3415	4163	28767	26073	22132
Copper .....*Cwts.*	2193	580	6843	3502	20445	44205
Iron .....*Tons*	—	—	—	—	—	—
Steel..... ,,	—	—	—	—	—	—
Lead..... ,,	151	442	449	813	1928	2392
Spelter..... ,,	—	—	—	—	—	—
Tin..... *Cwts.*	43	199	1665	382	4809	9037
Quicksilver ....*Lbs.*	—	—	—	—	—	—

Iron, steel, spelter, and quicksilver are imported free of duty, and consequently no returns can be made.

HULL, THURSDAY.—Messrs. T. W. Flint and Co.'s circular states, that, although railway shares have become a somewhat unpopular kind of security, the large amount invested in this property causes it to command the chief attention among shares. At present the market is very quiet, buyers and sellers waiting the result of the forthcoming half-yearly meetings. More attention is being paid to mining shares; but operations in this class of property are not yet by any means general here—Trefusis, Tremayne, Mary Ann, Gustavus, and Pendarves are the stocks most fancied at present. Great Devon Consols are offered at a market price, without finding buyers.

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL, For the First Seven Months of 1849 and 1850.

Metals.	1849.	1850.	In. in 1850.	Dec. in 1850.
Spelter.....*Tons*	2501	2448	—	53
Copper.....	3547	3325	—	222
Iron, British.....	19521	31024	11503	—
Ditto, Foreign.....	1169	731	—	438
Tin-plates .....*Boxes*	8052	11633	3581	—
Lead.....*Tons*	1915	1562	—	353
Steel.....	565	744	179	—
Quicksilver .....*Bottles*	27	22	—	5

PRICES OF MINING SHARES.

Many of our readers and valued correspondents having often suggested the desirability of enlarged information in our Share List, by stating the locality of each mine, and the mineral produced, we are at length induced to accede to their wishes. As it is exceedingly difficult to obtain a correct knowledge of all the mines in our list in London, we trust the agents, and others interested, will assist us in making corrections, filling up blanks, and rendering the list comparatively free from the errors it has occasionally been subjected to, from the withholding of information by parties connected with the mines. We shall also at all times feel thankful for correct information as to the number of shares amount paid, price, &c., our object being to present as perfect a list as can be procured.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1024	Alfred Consols (copper), Hayle, Cornwall	8¾	27 30
1248	Allt-y-Crib (silver-lead), Talybont, Cardiganshire	5	5 5½
1624	Balleswidden (tin), St. Just, Cornwall	9	14
128	Balnoon Consols (tin), Uny Lelant, Cornwall	42½	20
905	Barristown (lead), Carrick, Ireland	5½	30
3650	Bawden (silver-lead), Cornwall	⅛	⅛ ¼
4000	Bedford United (copper), Tavistock, Devon	3¼	4½ ¾
1280	Birch Tor and Vitifer (tin), Dartmoor, Devon	10¼	7¼ ¾
4000	Blaenavon (iron), South Wales	50	12½
1024	Bodmin Consols (lead), Wadebridge, Cornwall	3	3
5000	Bodmin Moor Consols (tin and copper), Bodmin, Cornwall	1	3
100	Botallack (tin and copper), St. Just, Cornwall	182	150
2000	Bottle Hill (tin and copper), Plympton, Devon	2	2
10000	British Iron, New, regis. (iron), South Wales	12	8
—	Ditto ditto, scrip	10	10
2400	Bryn-Arian (lead), Cardiganshire	2	2½ 3
107	Budnick Consols (tin), Perranzabuloe, Cornwall	52½	10 11¼
2000	Bwlch Consols (silver-lead), Cardiganshire	—	4½
1000	Callington (lead and copper), Callington, Cornwall	26	5 5½ 6
1000	Camborne Consols (copper), Camborne, Cornwall	7	4
20000	Cameron's Steam Coal (coal), Swansea, Wales	7	—
256	Caradon Mines (copper), St. Cleer, Cornwall	22½	10
256	Caradon United (tin and copper), St. Cleer, Cornwall	24	5 8
1536	Caradon Vale (copper and lead), St. Ive, Cornwall	¾	1¼ 1½
1000	Carbona (tin and copper), Crowan, near Camborne	5	12 15
1000	Carn Brea (copper and tin), Illogan, Cornwall	15	115 125
3000	Carthew Consols (cop. & lead), near Wadebridge, Cornwall	3¼	7
132	Carvannall (copper), Gwennap	21½	60 80
113	Charlestown (tin and copper), St. Austle, Cornwall	220	—
500	Comblawn (lead), Callington, Cornwall	5¾	4½
128	Comfort (copper), Gwennap, Cornwall	45	95 110
256	Condurrow (copper and tin), Camborne, Cornwall	20	110 115 17
2560	Cook's Kitchen (copper and tin), Illogan, Cornwall	14	6 6½
1000	Coombe Valley Quarry (slate), St. Ginnis, Cornwall	5	5 5½
1000	Copper Bottom (copper), Crowan, Cornwall	7½	—
900	Court Grange (silver-lead), Cardiganshire	9	10
211	Craddock Moor (copper), St. Cleer, Cornwall	27	8
256	Crane and Bejawsa, Camborne	2	10
1000	Cwm Erfin (lead), Cardiganshire	4	3½ 4
1000	Daren (silver-lead), Cardiganshire	2	8
7100	Derwent (silver-lead), Durham	10	3
1040	Devon and Courtenay Consols (copper), near Tavistock	11½	3 3½
1024	Devon Great Consols (copper), near Tavistock	1	230 235
1000	Dhirode (copper), Ireland	2	5
182	Dolcoath (copper and tin), Camborne	30	20
2560	Drake Walls (tin and copper), Calstock, Cornwall	6½	2½ 3
10000	Durham County Coal (coal), Durham	45	9
3000	Dyfngwm (lead), North Wales	10	5
1024	East Balleswidden (tin), Sancreed, Cornwall	¼	½
2500	East Birch Tor (tin), North Bovey, near Ashburton	3	3
1024	East Buller (copper), near Redruth, Cornwall	2	5
128	East Carn Brea (copper), Redruth, Cornwall	1	2½
2048	East Crowndale (tin), Tavistock	7¾	1¼
256	East Godolphin (copper), Crowan, Cornwall	13½	13
4000	East Gunnis Lake Junction (copper), Gunnis Lake	¼	¼ ½
128	East Pool (tin and copper), Pool, Illogan, Cornwall	15	65 70
256	East Seton and Wheal Maude, near Redruth, Cornwall	—	3
9000	East Tamar Consols (silver-lead), Beer Ferris, Devon	1½	1¼ 1½
256	East Tolgus, Redruth, Cornwall	1½	8
1000	East Trescoll (tin), Lanivet, near Bodmin, Cornwall	1	1¼
128	East Tywarnhayle (copper), St. Agnes, Cornwall	1	17½
94	East Wheal Crofty (copper), Illogan, Cornwall	125	95
128	East Wheal Rose (silver-lead), Newlyn, Cornwall	50	490
1280	Esgair Llee (lead), Llanfihangel-y-Croythin, Cardigan	2	3 3½
248	Exmoor Wheal Eliza (copper), South Molton, Devon	11	8 10
494	Fowey Consols (copper), Tywardreath, Cornwall	40	30
1024	Freidd Llwydd Mines (lead), Wales	1½	3½
256	Garras (lead), near Truro	41	23
4000	General Mining Company for Ireland (copper), Ireland	1½	4
100	Goginan (lead), Cardiganshire	5	200
256	Gonamena (copper), St. Cleer, Cornwall	44½	16
2500	Georgia Consols (tin), St. Ive's, Cornwall	2	3
256	Grambler and St. Aubyn (copper), Redruth, Cornwall	80	17½
96	Great Consols (copper), Gwennap, Cornwall	1000	250
512	Great Wheal Baddern (tin and silver-lead), Kea, Cornwall	20	85 90
512	Gt.Wh.Rough Tor Consols (copper), near Camelford	24½	20
6000	Growa Slate Company, Camelford, Cornwall	5	5
1026	Gustavus Mines (copper), Camborne	3	2½ 3
1024	Hawkmoor (copper), Calstock, Gunnis Lake	5	6 6½
6000	Heignston Down Consols (copper), Calstock, Cornwall	2½	3 3½
1500	Hennock (silver-lead), Hennock, near Exeter, Devon	26s	3
4500	Hennock (iron and tin), Hennock, near Exeter	21s	21s
512	Herodsfoot (lead), near Liskeard	16	14
10000	Hibernian (copper), Ireland	12½	1½
1000	Holmbush (lead and copper), Callington	23	12 15
1900	Keswick (copper), Portinscale, near Keswick	10	2 3
1024	Kingsett & Bedford (lead & copper), St. Mary Tavy, Devon	3½	3
787	Kirkcudbrightshire (lead), Kirkcudbrightshire, Scotland	8½	5
2048	Lamherooe Wheal Maria (copper and tin), Lamerton	10	3½
252	Lanarth Consols (copper), Gwennap, Cornwall	—	10
256	Lelant Consols (tin), Uny Lelant, Cornwall	47	17½ 20
160	Levant (copper and tin), St. Just, Cornwall	—	160
1000	Lewis (tin and copper), St. Erth, Cornwall	17	10½ 11
100	Lisburne (lead), Cardiganshire	75	600
1000	Llwynmalees (lead), Cardiganshire	9½	9 10
3500	Llynvi Iron (iron), North Wales	50	50
6000	Marke Valley (copper), Caradon, Cornwall	10	½ 1
5000	Mendip Hills (lead), near Bristol	3½	1¼ 1½
128	Metha (lead) Newlyn, Cornwall	34	—
256	Mineral Court (tin), St. Stephens, near St. Austle	13½	30 35
20000	Mining Co. of Ireland (copper, &c.), Waterford, Ireland	7	4¼ ½
1024	Moditonham & Marrabro' (copper & lead), Botus-fleming	1½	3½
1024	Montgomery (lead and copper), Montgomeryshire	6	10½ 11
3000	Nant-y-Car (copper), near Rhayader, Breconshire	—	5
1024	New East Crowndale (copper and tin), Tavistock	2	2
6000	North Wheal Basset (copper and tin), Illogan, Cornwall	—	10
1024	North Buller (copper), Redruth, Cornwall	2	5
256	North Tolgus (copper), Redruth, Cornwall	¼	½
100	North Pool (copper and tin), Pool, Cornwall	45	425
140	North Roskear (copper), Camborne, Cornwall	5½	160
262	North Wheal Leisure, Perranzabuloe, Cornwall	1½	1¼
512	North Wheal Vor (tin), Breage, near Helston, Cornwall	—	2½
128	Par Consols (copper), St. Blazey, Cornwall	55¾	650
1026	Pendarves Consols (copper), Camborne, Cornwall	2	6½
1000	Pendarves and St. Aubyn, Camborne, Cornwall	4	5½ 6
4934	Pennant and Craigwen (lead), Wales	3	5 5½
2048	Pentire Glaze, United (silver-lead), St. Mervin, Cornwall	3	5
1000	Penybank and Erglodd (lead), Cardiganshire	4	5
1024	Penzance Consols (tin), Sancreed, Cornwall	22s 3d	2½
1000	Peter Tavy and Mary Tavy (copper), Tavistock, Devon	2½	3½ 4
512	Plymouth Wheal Yeoland (tin), Plymouth, Devonshire	6½	6
2500	Rhoswiddol and Bacheiddon (lead), North Wales	10	10
10000	Rhymney Iron (iron), Rhymney, South Wales	50	12
10000	Ditto New	7	3
5000	Roche Rock (tin), Roche, near St. Austle	1	1½ 2
5000	Rocks Mine (tin), Roche, near St. Austle	5	6 7
2048	Runnaford Coombe (tin), Devon	2½	5 5½
2048	Snowdon (copper), Carnarvonshire, Wales	3	5
1024	South Balleswidden (tin), St. Just, Cornwall	½	½
9000	South Tamar (silver-lead), Beer Ferris, Devon	1	2½ 3
128	South Caradon (copper), St. Cleer, Cornwall	5	290
2000	South Carn Brea (copper), Illogan, Cornwall	—	10 12
1100	South Dolcoath (copper), Illogan, Cornwall	6	2 3
256	South Friendship Wheal Ann (copper), Devonshire	30	28 30
256	South Molton (lead), Devonshire	7	12 13
1024	South Plain Wood (copper), Ashburton, Devon	2	5 5½
300	South Speed (copper and tin), Uny Lelant, Cornwall	15	30
256	South Tolgus (copper), Redruth Cornwall	16	135
256	South Trelawny (lead), near Liskeard, Cornwall	28½	5 8
2000	South Wales Mining Company (lead), South Wales	1	1
256	South Wheal Basset (copper), Illogan, Cornwall	10½	310 330 60
124	South Wheal Frances (copper), Illogan, Cornwall	160	550
256	South Wheal Josiah (copper), Calstock, Cornwall	2	3½ 4
10000	Southern and Western, Irish (copper), Cork, Ireland	2½	4
280	Spearne Moor (copper), St. Just, Cornwall	30	40
128	Spearne Consols (tin), St. Just, Cornwall	10	60
256	St. Aubyn and Grylls (copper and tin), Breaze, Corn.	2½	7½ 8½
94	St. Ives Consols (tin), St. Ive's, Cornwall	—	80
128	St. Michael Penkivel (cop. & tin), Chacewater, Cornwall	5	10½
999	St. Minver Consols (silver-lead), Cornwall	1	6
1000	Stray Park (copper), Camborne, Cornwall	10½	21 22
9600	Tamar Consols (silver-lead), near Tavistock, Devon	3	4½
687	Tavy Consols (copper), near Tavistock	8	3 3½
6000	Tincroft (copper and tin), near Pool, Cornwall	7	12½ 13
1024	Trelusback, Stithians, Cornwall	—	7 8
128	Tokenbury (copper), St. Ive, near Liskeard	7½	8
240	Tolcarne (tin and copper), Camborne, Cornwall	8	17
2048	Trebell Consols	1½	1½
5000	Tregear Consols (antimony and silver-lead), St. Kew	1	2 2½
256	Tregorden (silver-lead) near Bodmin, Cornwall	10	5 6 7
256	Trehane (silver-lead), Menheniot	1½	25
5000	Treleigh Consols (copper), Redruth	6	3
150	Trelyon Consols (tin), St. Ive's, Cornwall	7½	10
2000	Trenance (copper), Helston, Cornwall	6	7 8
96	Tresavean (copper), Gwennap	10	150
120	Trethellan (copper), Gwennap	5	25
120	Treviskey and Barrier (copper), Gwennap, near Redruth	130	270 275
512	Trethevy (copper), St. Cleer, Cornwall	2½	3½

BRITISH MINES—*Continued.*

Shares.	Company.	Paid.	Price.
512	Treville (lead), Lewanick	⅛	7½
1000	Tyllwyd (lead), Cardiganshire	2	2½
200	United Mines (copper), Gwennap	50	160
5000	Warleggan Consols (copper), Cornwall	½	2
256	Wellington Mines (copper and tin), Perranuthnoe, Corn.	25	27½
128	West Buller (copper), Redruth, Cornwall	10	650
256	West Caradon (copper), Liskeard	20	92½ 95
512	West Fowey Consols (tin and copper), St. Blazey	40	60
1024	West Par Consols (copper), St. Blazey, Cornwall	5	—
2500	West Polgooth (tin), St. Ewe and St. Mewan, Cornwall	5	7
512	West Providence (tin), St. Erth, Cornwall	10	20 21
200	West Seton (copper), Camborne, Cornwall	45	110 20 50
120	West Trethellan (copper), Gwennap, Cornwall	5	20
512	West Wheal Frances (copper), Illogan, Cornwall	1½	10
1024	West Wheal Friendship (copper), Devon	3	3 4
3845	West Wheal Jewel (tin and copper), St. Day, Cornwall	12	2½
940	West Tolgus and Treloweth (copper), Illogan, Cornwall	12½	5½
500	West Wheal Towan (copper), Illogan, Cornwall	5	11 12
1024	West Wheal Treasury (copper), Gwinear, Cornwall	11½	9
1024	West Wheal Virgin (tin), Sancreed, Cornwall	¾	2
5200	Wicklow (copper), Wicklow, Ireland	5	16½
5000	Wicklow (copper and sulphur), Wicklow, Ireland	3	3¼ 3½
107	Wheal Adams (lead), Christow, Exeter	130	150
1000	Wheal Agar (copper), Illogan, Cornwall	—	5 6
256	Wheal Albert (copper), Cornwall	10	28 29
128	Wheal Ann (tin), near Helston, Cornwall	—	50½
256	Wheal Arthur (lead), near Redruth, Cornwall	4	3½
120	Wheal Bal (tin), St. Just, Cornwall	10	22
256	Wheal Benny (copper), Calstock, Cornwall	19½	5
1024	Wheal Bray (copper), Alternum, Cornwall	11½	—
232½	Wheal Calstock, Calstock, Cornwall	9	10
256	Wheal Carpenter (tin and copper), Gwinear, Cornwall	—	7½
268	Wheal Courtenay (copper), Cornwall	20	23
1024	Wheal Crebor (copper), Tavistock, Devon	1½	2¼
182	Wheal Elizabeth (copper), Redruth, Cornwall	9	42 45
1024	Wheal Emily (lead and antimony), near Plymouth	3	5½ 6
1024	Wheal Fortescue (copper), near Tavistock, Devon	4½	—
100	Wheal Friendly (tin), St. Agnes, Cornwall	70	66½
764	Wheal Franco (copper), near Tavistock, Devon	27	6 8
4000	Wheal Golden (lead), Peranzabuloe, Cornwall	2	5 6
1000	Wheal-an-Grose (tin), St. Columb Major, Cornwall	5	5 6
1000	Wheal Grose (silver-lead, copper, &c.), near Wadebridge	¼	—
256	Wheal Harriet (copper), Camborne, Cornwall	—	20
100	Wheal Henry (copper), Kea, near Truro, Cornwall	—	40
1024	Wheal Jane (lead), Landulph	1½	3¾
256	Wheal Kingston	½	1½
6000	Wheal Langford (copper and silver-lead), Callington	½	3 3½
2000	Wheal Langmaid (lead), Devon	½	¾ 1
112	Wheal Margaret (tin), Uny Lelant, near Hayle	79	150 170
512	Wheal Mary Ann (lead), Menheniot	5	51
1024	Wheal Neptune (copper), Perranuthnoe, Cornwall	1	1½
360	Wheal Oak, near Helston, Cornwall	25½	5
3000	Wheal Penhale (lead and copper), Cornwall	2	6
128	Wheal Plenty (copper), Redruth, Cornwall	19	20
128	Wheal Pollard (copper), St. Cleer, Cornwall	15¾	—
210	Wheal Prospect	4	7
120	Wheal Reeth (tin), St. Ive's, Cornwall	41	120
198	Wheal Seton (copper), Camborne, Cornwall	107	270
1056	Wheal Sarah (silver-lead), St. Kew, Cornwall	5	6
512	Wheal Sophia (silver-lead), Lezant, Cornwall	6¾	7
128	Wheal Squire (copper), St. Erth, Cornwall	—	5
1000	Wheal Susan, Breage, near Hayle, Cornwall	½	2
512	Wheal Trefusis (copper), Gwennap, Cornwall	4½	5
1100	Wheal Trescoll (tin), Lanivet, near Bodmin, Cornwall	6½	7½
260	Wheal Trelawny (silver-lead), near Liskeard, Cornwall	7¾	85
256	Wheal Tremaine, St. Ervan, Cornwall	9½	2½
1024	Wheal Tremayne (tin and copper), Gwinear, near Hayle	9¾	11¾ 12¼
267	Wheal Tryphena (tin and copper), Camborne, Cornwall	40	62½
126	Wheal Union (copper), Redruth, Cornwall	—	38 40
512	Wheal Venton (copper), Cornwall	2½	2½ 3½
1000	Wheal Vincent (tin), Alternum, Cornwall	5½	7
128	Wheal Violet (tin and copper), St. Stephens, St. Austle	2	2
184	Wheal Vyvyan (copper and tin), Constantine, Cornwall	—	60

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company (copper), Norway	14½	2½ 2¾
15000	Asturian Mining Company (coal, iron, &c.), Spain	15	1½ 2
20000	Australian (copper), South Australia	4	3½ 4
6000	Barossa Range (copper), South Australia	1¾	½
10000	Brazilian Imperial (gold), Brazil	23	6¾ 7½
12000	Cobre Copper Company (copper), Cuba	40	33 34
10000	Copiapo Mining Company (copper), Chili	14	4
20000	General Mining Association (iron & coal), Nova Scotia	20	12½ 13½
5000	Kinzigthal Mining Association (silver), Germany	2	½
5000	Linares (lead), Spain	3	2½ 2¾
500	Ditto New	3	3
5051	Mexican Company (silver), Mexico	59½	—
20000	Mexican and South American (silver), Mexico	8	1 1½
5000	National Brazilian (gold), Brazil	30	3½ 3¾
104000	North British Australasian (copper), S. A. & New Zea.	1	½
7000	Royal Santiago (copper), Cuba	10	9
11000	St. John del Rey (gold), Brazil	15	14½ 15
43174	United Mexican (silver), Mexico Av.	28½	5½
10000	Worthing (copper), Adelaide, South Australia	2	2 2½

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 9, 1850.

ENGLISH IRON. *a*	per ton.
Bar, bolt, & square, London	£5 2 6–5 10
Nail rods	5 17 6–6 10
Hoops	6 15 0–7 10
Sheets (singles)	7 7 6–8 5
Bars, at Cardiff & Newport	4 12 6–4 15
Refined metal, Wales*	3 5–3 10
Do. anthracite*	3 10 0
Pigs in Wales	3 0–3 15
Do. do. forge	2 3 6–2 10
Do., No. 1, Clyde ... *net cash*	2 3 6–2 5
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 10 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent Toughened Pigs, in Glasgow	2 15 0
Stirling's Patent Toughened Pigs, in Wales	3 10–3 15
Staffordshire bars, at the works	4 15–6 0
Rails	4 15
Chairs (Clyde)	3 10
FOREIGN IRON. *b*	
Swedish	11 15–12 0
CCND	18 0
PSI	—
Gourieff	—
Archangel	—
FOREIGN STEEL. *c*	
Swedish keg	14 0–14 5
Ditto faggot	14 7 6–15
ENGLISH COPPER. *d*	
Sheets, sheathing, & bolts, *p. lb.*	0 0 9½
Tough cake ... *per ton*	84 0 0

Tile	£83 0 0
Old copper *e* ... *per lb.*	8½*d*
Yellow Metal Sheathing	8*d*
FOREIGN COPPER. *f*	
Chili	—
ENGLISH LEAD. *g*	
Pig ... *per ton*	17 0–17 10
Sheet	18 0–18 10
Pipe	19 0 0
Red lead	19 0 0
White ditto	25 0 0
Patent shot	20 10 0
FOREIGN LEAD. *h*	
Spanish, in bond	16 0–16 10
ENGLISH TIN. *i*	
Block ... *per cwt.*	3 18 0
Bar	3 19 0
Refined	4 4 0
FOREIGN TIN *k*	
Banca, H. C.	4 4–4 5
Ditto, for Export only	—
Straits	3 18–4 3
TIN-PLATES. *l*	
IC Coke ... *per box*	1 7 6–1 8 6
IC Charcoal	1 12–1 13 0
IX ditto	1 18 0
SPELTER. *m*	
Plates, warehoused ... *per ton*	15 5–15 10
Ditto, to arrive	—
ZINC. *n*	
English sheet ... *per ton*	20 0–21 0
QUICKSILVER *o* ... *per lb.*	4s.

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.
* Cold-blast, free on board in Wales.

REMARKS.—IRON: Some considerable transactions in Welsh bars took place early in the week, at 4*l*. 10*s*. for immediate specification, and now sellers demand 4*l*. 12*s*. 6*d*. Scotch pigs continue in the same stagnant state, the few transactions taking place are all at 43*s*. 6*d*. for mixed Nos., free on board, at Glasgow.

TIN in the early part of the week was quiet, all waiting the result of the Dutch Trading Company's sale of 117,766 slabs of Banca tin in Rotterdam, on the 6th inst.; the whole of which has been briskly sold at 50½ florins, or 86*l*. laid down here, being an advance of fully 8*l*. per ton on the last transactions before the sale. The large Dutch houses were the principal buyers, while the English, French, and American offers, of from 43 to 46 florins, were totally unheeded. Last year the quantity sold was 250,000 tons, and the price obtained, 40 florins per ton. Sellers are now very firm in their demands, asking 84*l*. for Banca and 82*l*. for Straits, in bond; 2500 slabs Straits were sold yesterday at 80*l*. for uncertificated, and 82*l*. with certificate, part to arrive; also a few hundred slabs of Banca at 84*l*. The price of English is expected to be advanced 5*l*. per ton; the smelters are not sellers at late quotations.

TIN-PLATES are firmer, and a shade advance paid. There are many buyers for forward delivery.

LEAD flatter, but quotations unaltered—nothing doing.

COPPER remains inanimate.

SPELTER is steady, at 15*l*. 10*s*., but quiet. The present stock here is 3681 tons, against 1536 tons at this period last year.

LIVERPOOL, AUGUST 9.—Our market for iron continues in a dull inanimate state, but prices are, nevertheless, supported. We quote merchant bars, 5*l*.; rods, 5*l*. 15*s*.; hoops, 6*l*. 15*s*.; sheets (single), 7*l*. 15*s*.; Scotch pigs, mixed Nos., 52*s*. 6*d*. per ton.

GLASGOW, AUGUST 8.—Pig-iron continues dull, but firm at 44*s*., cash, for mixed Nos.

LEAD ORES

TICKETINGS FOR ABOUT 100 TONS FOXDALE LEAD ORE.

Douglas, Isle of Man, August 1.

Bidders.	*Price per Ton.*
Walker, Parker, and Co.—Dee Bank (purchasers)	£11 6 0
Combuartin Smelting Company—Barnstaple	9 5 0
Tamar Smelting Company—Beeralston	10 0 0
Thomas Somers—Bristol	10 0 0
Sims, Williams, Nevill, and Co.—Llanelly	10 4 6
Newton, Keates, and Co.—Bagillt	11 0 0
Pontifex and Wood—Newcastle	10 17 0
Locke, Blackett, and Co.—Newcastle	10 0 0

LEAD ORES—(*Continued*).

Ticketings at the White Horse Hotel, Holywell, August 8.

Mines.		*Tons.*	*Price.*	*Purchasers.*
Maesyrerwddu (Talargoch)		68	£10 14 0	Walker, Parker, & Co.
ditto	ditto	16½	10 8 0	ditto
Coetia Llys	ditto	24	11 11 0	Newton, Keates, & Co.
Hendre		70	10 7 6	Walker, Parker, & Co.
ditto		20	10 3 0	ditto
Fron Fawnog		45	8 14 0	Mather & Co.
ditto		11	9 13 6	Walker, Parker, & Co.
Talacre		55	11 18 6	Newton, Keates, & Co.
Deep Level (Halkin)		80	10 5 6	ditto
Lloc		75	11 6 0	J. P. Eyton.
Machynlleth		43	11 1 0	Newton, Keates, & Co.
ditto		11	9 10 6	Walker, Parker, & Co.
ditto		1½	11 12 6	J. P. Eyton.
Newtonards		55	10 8 0	ditto
Total tons		574½.		

Sold at Aberystwith, August 5.

	Tons.	Price.	Purchasers.
East Logylas	60	£10 7 6	Panther Smelting Co.
ditto	60	10 10 0	ditto
Frongoch	80	10 0 0	ditto
Total tons (21 cwts.)	200.		

BLACK TIN

Sold on the 2d August, to L. C. and W. Daubuz.

Mines.	*Cwts. qrs lbs.*	*Price per Ton.*	*Amount*
Wheal Vincent	4 3 5	£30 10 0	£7 6 2
ditto	2 2 7	45 10 0	5 16 6
ditto	14 1 10	40 5 0	28 17 1
ditto	6 3 25	40 10 0	14 2 4
ditto	8 2 21	25 0 0	10 17 2

Total, 37 cwts. 1 qr. 12 lbs.—Amount of money, £66 19s. 3d.

Sold on the 31st July to the Carvedras Smelting Company.

Mine.	*Tons cwt. qr. lbs.*	*Price.*
Mineral Court	£3 17 1 13	£53 10 0
ditto	0 6 3 19	30 15 0

COPPER ORES.

Sampled July 24, and Sold at Andrew's Hotel, Redruth, August 8.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
Carn Brea	89	£6 7 0	Wheal Buller	50	£4 16 6
ditto	86	6 16 6	ditto	30	6 8 0
ditto	85	4 16 6	Levant	73	4 7 6
ditto	80	4 0 0	ditto	48	2 6 6
ditto	68	7 4 0	ditto	45	6 16 0
ditto	67	8 3 6	Wellington Mines	52	5 2 6
ditto	65	3 18 0	ditto	47	5 3 6
ditto	47	3 10 6	ditto	42	6 18 0
ditto	44	4 2 0	ditto	9	17 15 0
ditto	38	2 10 0	Alfred Consols	64	5 16 0
ditto	37	12 6 6	ditto	54	4 17 6
Tywarnhayle	125	2 19 6	ditto	28	11 12 0
ditto	102	2 12 0	West Wh. Treasury	62	5 19 0
ditto	82	4 6 6	ditto	52	3 12 0
ditto	73	3 5 6	West Wheal Seton	62	4 3 0
ditto	71	8 7 0	ditto	33	5 2 6
ditto	39	3 19 0	Wheal Agar	62	5 7 6
ditto	15	3 11 0	ditto	28	2 10 6
Nancekuke	111	1 16 6	Wheal Vyvyan	32	2 4 0
ditto	58	4 16 6	ditto	24	4 19 0
ditto	16	2 4 6	Botallack	42	8 0 0
Par Consols	88	5 17 0	South Wh. Fortune	27	4 17 6
ditto	79	8 6 6	Michell's Ore	17	1 16 0
ditto	78	9 0 6	ditto	8	2 9 0
ditto	72	7 0 6	Wheal Prosper	13	3 9 6
Wheal Buller	92	4 17 0	ditto	10	2 18 0
ditto	61	8 14 6			

TOTAL PRODUCE.

Carn Brea	706	£4070 3 0	West Wh. Treasury	114	£556 2 0
Tywarnhayle, Nancekuke	692	2548 19 6	West Wh. Seton	95	426 8 6
			Wh. Agar	90	403 19 0
Par Consols	317	2382 4 6	Wh. Vyvyan	56	189 4 0
Wh. Buller	233	1411 13 6	Botallack	42	336 0 0
Levant	166	736 19 6	South Wh. Fortune	27	131 12 6
Wellington Mines	150	959 5 6	Michell's ore	25	50 4 0
Alfred Consols	146	959 5 0	Wh. Prosper	23	74 3 6

Average Standard .... £96 9 0 | Average Produce 8¾

Average Price per ton £5 6 0

Quantity of Ore .... 2882 tons | Quantity of Fine Copper, 240 tons 3 cwts.

Amount of Money £15,236 4 0

LAST SALE.—Average Standard ...... £102 18 0.—Average Produce 7

Standard of corresponding sale last month, 97*l*. 14*s*.—Produce, 9½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	194	£1139 10 6
Vivian and Sons	563	3634 12 0
Freeman and Co.	281	1530 19 6
Grenfell and Sons	631	2530 7 0
Crown Copper Company	52	367 18 0
Sims, Willyams, and Co.	364	1521 19 0
Williams, Foster, and Co	635	3723 0 0
Schneider and Co.	162	787 18 0
Total tons	2882	£15,236 4 0

NO SALE on Thursday, August 15.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Josiah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria, 1412—West Caradon 346—Marke Valley 273—Fowey Consols 233—Wheal Friendship 208—Phœnix Mines 165—Holmbush 127—Bedford United Mines 119—Wheal Mary 103—South Tolgus 94—West Wheal Jewel 57—Wheal Pink 51—Heignston Downs 50—Wheal Unity Wood 6.—Total, 3244 tons.

COPPER ORES

Sampled July 17, and Sold at Swansea, August 8, 1850.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Burra Burra	67	37	£26 5 6	Cuba	48	11½	£8 1 6
ditto	66	35¾	26 5 6	Kapunda	57	27¾	20 5 6
ditto	65	36	26 3 0	ditto	55	29	21 1 6
ditto	64	36	25 15 6	ditto	50	28¾	20 11 6
ditto	62	35½	26 3 0	ditto	35	27¾	20 2 0
ditto	63	36½	26 10 6	Burra Burra	70	38½	28 5 0
ditto	85	36½	27 1 6	ditto	50	38½	28 4 0
ditto	60	36	25 14 6	ditto	40	37	27 8 0
ditto	59	35½	26 3 6	ditto	20	38	27 16 6
ditto	58	36¾	26 11 6	Spanish	66	10	6 14 0
ditto	57	37¾	27 17 0	ditto	60	9¾	6 13 6
ditto	56	38	26 16 6	ditto	3	7½	4 15 0
ditto	58	37½	27 13 0	ditto	2	23¾	16 19 0
Cuba	103	12½	8 12 0	Waterloo Slag	44	3	1 5 0
ditto	91	22	16 1 0	ditto	23	5½	2 18 0
ditto	80	11¾	8 6 6	Kaw-aw	66	12½	8 4 6
ditto	66	11¾	8 9 0	Gloster Slag	4	4½	2 14 0

TOTAL PRODUCE.

Burra Burra	820	£21760 4 0	Spanish	131	£890 17 0
Cuba	388	3957 13 0	Waterloo Slag	67	121 14 0
Kapunda	197	4047 1 0	Kaw-aw	56	460 12 0
Burra Burra	180	5040 0 0	Gloster Slag	4	10 16 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	76	£1138 14 0
Freeman and Co.	92	1859 3 6
Grenfell and Sons	382	9057 1 3
Sims, Willyams, and Co.	352	7257 9 0
Vivian and Sons	411	5430 17 0
Williams, Foster, and Co.	412	7708 4 0
British and Foreign Copper Company	125	3280 18 3
Mason and Elkinton	23	556 10 0
Total	1843	£36,288 17 0

Copper ores for sale August 22.—Cobre 101, ditto 96, ditto 86, ditto 53, ditto 44, ditto 37, ditto 5, ditto 2, ditto 87, ditto 75, ditto 73, ditto 58.—Berehaven 125, ditto 117, ditto 107, ditto 100, ditto 77 ditto 14.—Burra Burra 60, ditto 55, ditto 52, ditto 46, ditto 37, ditto 35.—Chili 50, ditto 49, ditto 47, ditto 40, ditto 33.—Kapunda 43, ditto 42, ditto 40, ditto 38, ditto 7, ditto 39.—Kaw-aw 54, ditto 53, ditto 50, ditto 23.—Cienfuegos 60, ditto 55.—Llanberris 68, ditto 42.—Burra Burra 51, ditto 49.—Lackamore 36.—Gurtnadyne, 32.—Ballinoe 11.—Knockmahon 50.—Bonn 40, ditto 6.—Union 29, ditto 13.—Ballygahan 32.—Vine Slag 7.—Total quantity of ore to be sold, 2732 tons.

AVERAGES.

	Produce.	Price.	Standard.
British	3½	£1 17 0	£105 18 0
Foreign	28	20 8 0	80 12 6
Sale	27½	£19 13 6	£80 15 0

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	9¾	£6 12 10	£93 17 6
Foreign	21¾	15 8 1	82 5 0
Sale	16½	£11 11 4	£85 5 0

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars ... per oz.	£3 17 9	New dollars ... per oz.	£0 4 10½
„ Portugal pieces	0 0 0	Silver in bars (standard)	0 4 11¾

NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"W. M." (St. Agnes).—The East Cornwall Association was established "for mining and other purposes"—to buy mine shares; to take mine sets; to work mines; and to purchase mine materials. Address Mr. Pickthorn, the secretary, Callington, who, we are assured, will forward any particulars that may be required.

"R." (Manchester).—The Edinburgh and Glasgow Railway have a wire rope, in one piece, 14,000 feet long—the weight of which is about 22 tons.

An "Adventurer in Wheal Vor" had better apply to the purser, who alone can furnish the information. We have no means of obtaining it but through him.

"Mai Meme" (Sunderland).—As long as shares in a joint-stock bank stand in the name of an individual, that individual is undoubtedly liable. If the shares in question were not transferred by him in the usual way, we cannot see how he could be off the annual list for three years. Three, nor any other number of years, can ease a holder of his liability, unless he has transferred his shares according to the provisions of the Deed of Settlement.

"A Young Smelter and Constant Reader" (North Britain).—Ores containing a large portion of sulphur are very refractory in the furnace, and the process of roasting, or calcining, is to expel the sulphur, and thus simplify the operations in the furnace. We are not aware that any higher per centage is obtained, only economy in the operations. There is no work in the English language—at least, that we are aware of—on the smelting of lead; more descriptive articles on the subject have appeared in the *Mining Journal* than in any other publication. Mitchell's "Manual of Practical Assaying" treats on all metallurgical operations.

"Geologicus" (Tavistock).—In speaking of the greatest depth of mines, or of boring operations, we must distinguish between the *absolute* depth, or that below the surface of the earth at the point where the work begun, and the *relative* depth, or that below the level of the sea. The greatest relative depth yet attained is, probably, the salt-works of New Salzwerk, near Minden, in Prussia, which in June, 1844, had a relative depth of 1993 feet, and the absolute depth was 2231 feet, and the temperature of the water at the bottom was 90·8 Fah., or 1° for every 5·8 feet. The deepest mine in England is the Apindale Colliery, near Newcastle-under-Lyne, where the men work at 2175 feet from surface. The Monkwearmouth Colliery, in Durham, is 1794 feet. The absolute depth of some mines on the continent, which, from being situated on elevated mountains, do not reach the sea level, are much greater. Essleshacht, at Kuttenburg, in Bohemia, now inaccessible, reached the prodigious depth of 3778 feet, more than two-thirds of a mile; and at Rorerbuhel, in the sixteenth century, a depth of 3000 feet had been reached. The celebrated mine of Joachimsthal is 2120 feet.

"L." (Liverpool).—A return of 12s. 6d. per share was made on the Staffordshire and Shrewsbury Railway in 1846 to some of the shareholders, when it was stopped by the advice of counsel, in consequence of proceedings being instituted in Chancery against the directors. Mr. Hutton (of 45, Moorgate-street), accountant, has been appointed the official manager for winding-up the affairs of the company. After the vacation, the contributories will be called upon to pay up their proportions, when the liabilities (of which there is, at present, scarcely any) will be paid off, and the residue divided *pro rata* amongst the shareholders.

"O. P. Q." (Mount-street, Grosvenor-square).—Basin-shaped strata, which sink and reappear at distances like the coal measures, can be measured with great exactness, although the deepest portions are inaccessible to the miner. By the angle of the dip of coal the true depth may be approximated to very nearly. Thus, the depth of the Liege coal basin was found by the celebrated geologist, Herr von Dechen, as also by Humboldt and Oeynhausen, to be 3809 feet below the surface. The supposition of the coal strata of the Saarbrucken is enormously deeper, being in the district of Dutweiler, near Bettingen, 21,358 below the level of the sea, or 3·6 miles—a depth below the sea equal to the height of Chimborazo above it, and at which we should infer the temperature to be as high as 467° Fah. From the highest summits of the Himalayas, to this depth, we have, therefore, a vertical distance of 48,000 feet, equal to 1-435th part of the earth's semi-diameter.

Inquirer" (Gateshead).—Most people who have been in the habit of attending scientific lectures have seen that very striking experiment in electricity, where a glass jar, previously electrified, is placed over a number of pith balls. These latter are instantly thrown into a state of rapid motion, leaping to a height of several inches, and mingling in a dance of such velocity and intricacy, that the uninitiated observer would fancy for the time they were endowed with life. This experiment offers an excellent illustration of Volta's celebrated theory of the formation of hail. This philosopher supposes that two strata of clouds, highly charged with opposite kinds of electricity, float in the atmosphere, one above the other. If, now, the minute and frozen particles of water suspended in the upper stratum are attracted by the lower, they will not merely descend, and exchange the character of their electricity at the surface of the latter, but, by virtue of their inertia, they will penetrate it to a certain depth, and thus become surrounded by a new layer of ice. The moment this is effected, they retrace their steps—being now repelled by the lower stratum of clouds, and attracted by the higher, where again the phenomena will be reversed, and descent will ensue with another minute addition of frozen material to the original nuclei, and so the movement will continue backwards and forwards from one cloud to another—the congealed globules continually increasing in size, till at last the force of gravity overcomes that of electrical attraction, and they descend to the earth in rapid succession as a hailstorm. The play of electricity in the upper regions of the air is certainly in unison with this ingenious theory. The functions of the clouds appear to be most intimately connected with the electric force. The traveller on the Alps may frequently look down upon clouds passing in different directions under the influence of opposite currents of air; and, if he be an observer, he may see as they cross each other's path the most marked evidence of attraction, or repulsion, according as they are similarly or dissimilarly charged.

"N. R." (New-road).—Apply to a mine broker—we never give advice as to the prospects of new adventures. The reports under the heading "Mining Correspondence," are all official: we should prefer attaching the names of the writers, but the stamp office authorities have, in their wisdom, decided that the usual charge of advertisement duty shall be made for each report so signed.

Mr. David Mushet's papers on Mine Inspection, and Form of the Blast-Furnace, will appear next week; also Mr. W. Laird on the Coal Trade of Liverpool; and several other matters, we have been compelled to postpone.

*** It is particularly requested that all communications may be addressed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 10, 1850.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

If we entertained a set purpose of attracting to the mining operations of this entire island more public attention than they are at this moment receiving, perhaps it would not be in our power to allure the mind of England more effectually to the subject than by setting out in figures the value of the annual metalliferous produce of the little kingdom against the total annual value of the gold produced throughout the whole world. Without going tediously into particulars, the market value of the iron, copper, tin, lead, zinc, &c., raised yearly in this country, touches the sum of 14,000,000*l.* sterling; and the total value of the gold gathered up in both continents scarcely covers 13,000,000*l.* If to the value of our mineral products we were prompted to add (as in all strictness we might) the value of the salt and coals brought to the surface, and sold annually in this island, the gross total of our mining produce would be set down at 25,000,000*l.* sterling per annum. But we rest most complacently of all upon the lesser figures; and we find from these that the net value of the popular metals, as distinguished from the rarer ones, so essential to the progress of society, and the perfection of the arts, is, taking the soil of this island only as their matrix, more than that of the gold furnished by all the shores and mountains of the entire globe. The fact is first of all a motive for thankfulness, and then for our making the best uses of it. Neither Nature nor Providence, we may take leave to say, meant to excuse us in the negligence on the misapplication of the most right-handed of all our material gifts; they furnish, in fact, additional reasons for diligence, and should beget in every man connected with it a determination that no part of this rich estate—this superb inheritance—should continue fallow and unfruitful in his hands.

The whole of the foreign mines, the progress and reports from which are from time to time recorded in our columns, may, at the date of the last advices, be considered in a tolerably satisfactory and promising condition, and so far tend to draw attention to mining speculation in distant lands; but on carefully perusing the statement, which we gave in our last Number, of the produce of British mines, compared with the dividends previously noticed, we think there can be but little hesitation in forming a pretty safe opinion as to which class of speculations is likely to turn out the most advantageous. In Cornwall and Devon alone there were raised, and sold by public ticketing, during the year ended June 30, 150,899 tons of copper ore, producing in round numbers 804,000*l.*, and paying in dividends 101,594*l.*, or about 12½ per cent. on the average. As usual, for the last four or five years, the Devon Consols adventure bears away the belle, having produced 15,512 tons of ore, returning 102,884*l.* and paid in dividends 19*l.* per share, or 1900 per cent. per annum. The next in amount on the list is Carn Brea, 9947 tons, returning 65,416*l.*, and having paid dividends of 7*l.* per share, or near 50 per cent. The United Mines, with a sale of 11,940 tons, producing 49,833*l.*, has paid only 5*l.* per share, or 10 per cent. North Pool, producing 6509 tons, with a return of 26,584*l.*, paid 72*l.* 10s. per share, or about 180 per cent.; and North Roskear, 5485 tons, returning 28,420*l.*, paid 15*l.* per share, or 150 per cent. There are many other mines producing copper only, to which that statement alone refers, having paid very satisfactory dividends, and on reference to the lead mines the results are equally gratifying. East Wheal Rose, Mary Ann, Trelawny, Tremayne, Trehane, Comfort, and others, are among the profitable adventures of the day, and numerous equally successful undertakings might be detailed among our tin mines, but, unfortunately, we have no means of arriving at any thing even like an approximation to the truth with regard to the total produce of tin in Cornwall and Devon.

Among the lead mines in Wales, although in our list only two appear to have paid dividends in the past half-year—the Lisburne Mines 15*l.* per share, or 20 per cent., and Goginan 45*l.*, or 900 per cent.—there are others equally profitable; but, from the exclusive system of management, and effecting sales, pursued, we are unable to obtain correct returns. Upon the whole, however, they have been highly productive, and promise profitable results at an early period. Thus, at Shallee, there was raised in the last quarter 180 tons, producing 2907*l.*; Maesyrewddu, 266 tons, 3166*l.*; Coetia Llys, 104 tons, 1342*l.*; Hendre, 295 tons, 3459*l.*; Fronfownog, 463 tons, 5190*l.*; Talacre, 140 tons, 3122*l.*; Deep Level, 266 tons, 3025*l.*; Maes-y-safn, 345 tons, 3870*l.*; Foxdale, 280 tons, 3457*l.*; Machynlleth, 243 tons, 2746*l.*; Bwlch Consols, 175 tons, 2642*l.*; Penyr-henblas, 189 tons, 2195*l.*; Westminster, 218 tons, 2512*l.*; Jamaica, 200 tons, 2437*l.*; Cwmystwith, 220 tons, 2425*l.*; and numerous others, which will be seen in our return in the Mining Journal of the 6th July, as producing various smaller quantities. The development of mines in Wales has been making great progress during the last few years, and the principality bids fair to become a district in importance second only to Cornwall.

Enough, we think, has been said to call attention to the favourable position of our home mines; and how much greater are the chances of successful results when carried on under the eye of the adventurer, than when the operations are conducted in distant countries, which unfortunately, in so many instances have proved altars on which have been immolated millions of British capital, which might have been applied to profitable uses in similar pursuits at home.

Some 30 years ago the Halkin Mines, in Flintshire, had fallen into a state of the lowest disorganization, and notwithstanding the bodies of ore discovered were rich beyond example, the whole of the working population of miners were heavily indebted to the mine, and the mine to the proprietor, and the process and machinery of working had arrived at a dead lock. In this dilemma, Captain Absalom Francis, then a young and scientific miner (but now whose fame is world-wide as one of the best machinests and miners in Christendom), was sent for by the Marquis of Westminster, to introduce a system in accordance with the advanced knowledge of the day. This he accomplished so successfully, that in a very short period the Halkin Mines became the most profitable in Flintshire; and the Cornish steam-engine, and the general principles of Cornish mining, were consequently introduced with the greatest benefit.

In the process of time, the Milwr Mines, also said to be rich, through want of intellectual power, became involved in inextricable difficulty; the lower columns of pumps were lost, and now remain in the mine abandoned, a testimony of the total failure of the late management. About two years ago, Capt. Absalom Francis procured a company, to buy and work the mine, from Liverpool, and were proceeding vigorously to develope the plan of restoring the concern, as a source of industry to the country, and profit to the proprietary, when the miners showed signs of insubordination, and a desire to return to the "cores" of six hours instead of eight, which had been introduced with such success to the country for upwards of a quarter of a century.

One would have thought, under such circumstances, that the magistrates of the county would have given the weight of their position and authority to the cause of justice, and the restoration of order; but no such thing, as will be seen in another column. The magistrates, aware that the mob had broken into and searched Capt. Francis's house, and that they showed every determination to resort to personal violence, dismissed the delinquents, deliberately stating that the most advisable plan would be to come to an amicable arrangement; and this after robbery had been committed, and murder coolly threatened, which probably would have been perpetrated during the excitement of the men, had not Capt. Francis wisely absented himself. We know not what principle of law or justice guides these sapient Flintshire magistrates, but they certainly do not adopt the old English adage, that "every Englishman's house is his castle." The *Denbigh Herald*, in a very soft-soapy style, supports the magistrates' views and accuses Capt. Francis of being an entire stranger—one who has done more for the mining population of Flintshire than any native! In the present enlightened age, we had hoped such exclusive views had been numbered with the things that were, and that the Welsh would have felt towards their best benefactors sentiments worthy citizens of the world. Telford, who threw the magnificent and fairy-like bridge across the Menai—George Stephenson, whose locomotive engine has raised the Principality to eminence in a commercial point of view—and his son Robert, who has joined Anglesea to Bangor by his bridge of tubes—were all strangers, but whose genius and perseverance has not been the less advantageous to the inhabitants of Wales.

As to the injury said to be inflicted on the men by eight hours' work, we believe it to be, fudge! and an invention of the writer. In Cornwall, where the miners work 250 to 300 fms. below the level of the sea, and where the labour of ascending and descending the ladders is equal to the eight hours complained of in Flintshire, they work the same "cores" without difficulty or complaint; they know their own and their employers' interests are identical, and could not be supported on six hours' work per day; and they strive to get an honest livelihood, and save their county from ruin. We have no hesitation in saying, that the magistrates in this instance have not done their duty; they have suffered the majesty of the law to be insulted, without inflicting a punishment; and those who are thus remiss in the due administration of justice, from whatever cause—fear, favouritism, or local prejudice—can no more inspire confidence, and are no longer fit to bear her Majesty's commission of the peace.

Notwithstanding the support which the bill carried through the House of Lords by the Earl of Carlisle, for the inspection of coal mines, with a view to prevent accidents, met with in that assembly, evidenced from the fact that no division took place upon it, it will be seen, from a communication in another column, that the supporters of the bill have, at least, one opponent, who is determined to do battle against what he terms the "monstrous injustice of allowing a Government inspector to survey and take plans of my underground and old workings," and to successfully oppose which he threatens "deeds of dreadful note." The Marquis of Londonderry, in the event of a legislative enactment being put in force, dictated alike by humanity and policy, a measure opposed by a mere fraction of obstinate and short-sighted colliery proprietors, and supported by nine-tenths of the liberal-minded and thinking portion of the community, and by the working colliers themselves, threatens to gratify his revenge by turning out the widows and the fatherless who may be domesticated on his estates, and who lost their protectors, and were thus reduced to their dependent state, in the production of the earth's mineral riches, to swell the overgrown wealth of this humane specimen of aristocratical presumption; who has ever set his face against all measures founded on liberal views, and tending to progress with the spirit of the age, and who would re-establish an age of feudalism, when earls and barons were self-willed irresponsible tyrants, and the strength and industry of the country represented by slavery and ignorance. As to the effects which the bill, in its present shape, is likely to have on the colliers' safety, or on colliery operations, it appears to us to be likely to do neither harm nor good; and, as we have before observed, it is only from its being a step in the right direction, and may lead to a better defined law, that it is worthy of support. With respect to the compulsory production of maps and plans, which the marquis views with such horror, and against which he fulminates his loudest anathemas, there is not a scientific coalviewer—aye, and coalowner, too, if he is blessed with the smallest portion of common sense and candour—but who will bear witness to the absolute necessity of correctly and continuously keeping a record of the workings as they extend, if the safety of the pit and the men's lives are at all considered, or if the coal is to be got in the most economical manner, and, consequently, with the greatest profit to the owner. Yet, from all the evidence collected upon this part of the subject, it appears that, in too many cases, this necessary labour is almost utterly neglected; and it seems, to our humble judgment, to be about the most important clause in the bill, and will not only increase the safety of the men in working, but advance the interest of the proprietor. It may be the fashion in some quarters, and thought very fine, to rail and sneer at philanthropists and humanity-mongers, as those are termed who labour for the amelioration of the working and wealth-producing classes of the community; but the day has arrived when it is universally known and felt that wealth has its duties as well as its rights, and when measures, intended for the security of the best portion of society, are not to be *burked* by a few millionaires, who, although they can boast that they are richer than their neighbours, possess but little of that excellence which constitutes superiority in the human character.

The bill quietly passed through a committee in the House of Commons on Thursday evening, Mr. D'Israeli, who was to have been the Bonadil of the evening, and led on a most determined opposition, being absent; and it will, doubtless, shortly be read a third time, and become the law of the realm. The number and salaries of inspectors are left to the discretion of the Secretary of State.

[FROM A CORRESPONDENT.]

The explosions of the boilers of two river steamers, within a short period of each other, presses on our attention this important question—Are the provisions of the 9th and 10th Vic., cap. 100, of any value in increasing the security of the public against such calamities? We fear lest the interference of Government lessens the responsibility of parties on whom otherwise it would have rested. In reviewing the evidence given at the inquest on the sufferers on board the *Queen*, at Devonport, we think throughout that much weight had been given by the proprietors to the fact of her having, within a few weeks, undergone the examination of the Government inspectors. We are not surprised at this. Capitalists, themselves unacquainted with the nature of steam machinery, possess themselves of steam-boats as an investment; and, since they are called on twice a year to pay the fees to the Government inspectors, it is but natural to suppose that they are inclined to be satisfied with their certificate under circumstances which, for their own protection, would otherwise have called on them to adopt some other precaution; hence it may probably arise that the Act of the Legislature, intended for the protection of the public, may produce a contrary result; and that thus the Act of the 9th and 10th of Vic. may tend to increase the occurrence of such accidents as those for the prevention of which it was enacted.

We presume it is a matter of but little consequence to the public the ascertaining whether the steaming qualities of the boiler are equal to the task—whether it requires 4 lbs. or 14 lbs. of coal per horse-power per hour—whether the slide valve is *in* or *out* of order—or whether the slip of the paddle-wheel be one-fifth or one-third of the vessel's speed. These are questions which might safely be passed over by the Government surveyors into the hands of the owners, with a full conviction that, as matters of economy, they cannot fail to press themselves on their attention, and as subjects in which the public are but little concerned, since in no defect of such character could possibly have orginated the accidents which gave rise to the 9th and 10th of Vic., cap. 100.

What, then, ought to be the nature of Government inspection? Before we can safely answer this question, it is necessary that we should review the causes of the various explosions of the boilers of steam-boats that have come under our notice. Having thus investigated the subject, we are prepared to maintain that these calamitous results have mainly proceeded from two causes—first, from *criminal* tampering with the safety-valve; and, secondly, from the defects in the stays of the boiler. Against the first of these no Government inspection can afford a protection—to punish the criminal party appears to be the chief means to be be employed for its prevention. But, we believe, that by far the more numerous sources of accidents of this class have arisen from the second-named cause—the defective state of the stays of the boiler. This was the cause of the bursting of the boiler of the *Royal Victoria* alongside of the quay at Hull, by which accident nearly 100 persons lost their lives. A similar accident happened, occasioned by the same defect, to the *Archimedes*, but not attended with the same disastrous consequences.

From the reports of the inquests now before us, there can be little if any doubt that the late explosion of the boiler of the *Queen* was occasioned from a defect in the stays of the boiler, and that the calamitous explosion on board the *Red Rover* in part originated in the same defect. And yet it appears, from the evidence of Mr. Simpson, engineer of the *Sir Francis Drake*, that "it was not usual for Government inspectors to go inside the boiler when they inspected steamers;" and the inspector states that "it was not necessary at that time to go inside it, and no one went inside;" in fact, it appears that the steam was up at the time of inspection. We are at a loss to know of what value such an inspection can be in connection with the safety of the public. We have failed to find recorded a single instance of the explosion of a marine boiler previously to the passing of the 9th and 10th Victoria, which might have been prevented by an inspection of the description of the one to which we have alluded. But there appears to exist another defect in connection with Government inspection, as illustrated in the case of the *Queen*. The maker of the boiler was the Government inspector; and, in giving his evidence, he manifests a degree of subserviency to the opinion of the owners, which is too likely to exist when the interest of the employer is submitted to the tribunal of the judgment of the employed. When referring to the fact of the mercurial gauge being out of order, he observes that "the shareholders of the *Queen* would have thought he had dealt very hardly with them if he had refused a certificate on that ground." And, again, the maker of the boiler must, under any circumstance, be held responsible for the efficiency of his work, and, consequently, the public is deprived of the check of a second opinion when the responsibility, both of maker and inspector, merge in one individual. Nor can we divest ourselves of the idea, that the appointment of a manufacturing engineer to the office of Government inspector confers on him a monopoly of the business connected with the marine engines of the port. When we consider the feeling manifested between the inspector and the owners during the inquest—the attempts which either made to shift the responsibility on the other party, and also the warm and angry expressions which, on one occasion, passed and repassed—we cannot account for the fact, that the one has employed the other to repair the boiler of the *Queen* upon any other principle than that the former was afraid to employ other hands, lest the inspector might use his power to their detriment. If, then, the destruction of the spirit of salutary competition—if the establishment of a monopoly be an absolute evil—we have better reason to believe that the 9th and 10th Victoria, c. 100, has injured the public interest, than we have to imagine that it has contributed to the safety of the community.

[While we advocate a legitimate system of legislative control where human life is jeopardised, we cannot look over so gross a dereliction of duty as has been manifested on the part of these inspectors, whose conduct ought to be made the subject of a searching investigation; neither should a manufacturing engineer be appointed to such office, as it is next to impossible he can perform his duty impartially. In the Colliery Inspection Bill this principle is recognised, as no viewer can be an inspector.]

NEW MACHINE FOR THE SHIPMENT OF COAL FROM BARGES.

An advertisement appeared in our columns on the 15th June last from the committee of the Glamorganshire Canal Company, offering a reward of one hundred guineas for the best machine for transferring coal from barges into the holds of vessels. There being 134 competitors, a great number of models were exhibited at the Cardiff Arms Inn, Cardiff, on Wednesday week; and the committee met to award the prize, which they decided should be divided between Mr. G. W. Armstrong, of Newcastle-upon-Tyne, and Mr. W. D. Burlinson, of Sunderland. The machine designed by Mr. Armstrong consisted of a crane, worked by hydraulic pressure. The cylinder and piston for raising the coals were placed underground, and a separate cylinder produced the circular motion of the jib. The movements are stated to have been produced with great delicacy and precision by means of operating on two valves. The water pressure was obtained from a small pump, which, forcing the water into the cylinder, having a loaded plunger, in its constant endeavour to descend, kept up a uniform pressure on the machine. Mr. Burlinson's machine (of which we shall give an illustration and description in an early Journal) consisted of a lever, about 33 ft. long, fixed on a shaft two-thirds from its upper end, on which a leading pulley revolves. A steam-engine of 20-horse power works two of these levers. When the coal-box is raised, by the ropes being wound over rollers to the end of the lever, its weight causes it to descend to the deck of the ship; and when the coal is discharged, a counterbalance at the lower end of the lever brings it back to its former position.

APPLICATION OF COMPRESSED AIR TO MINING PURPOSES.

At the colliery of Messrs. Allan and Mann, at Gowan, compressed air has been successfully employed as an agent for transmitting power from a steam-engine at surface to a winding-engine 100 fms. underground, and half-a-mile from the pit's mouth. The engine works two pair of air-pumps, at a pressure of 40 lbs. on the inch. The steam cylinder is 21 in. diameter, and 42 in. stroke. The column on which the beam of the engine is fixed is hollow, and forms a receptacle for the condensed air, before it passes into the pipe which carries it down the shaft. Instead of the ordinary slide valve, the engineer has applied the sperical ball valve. The air is condensed to a pressure of 30 lbs. to the inch, and the contents of the pipe, which is 10 in. diameter, is sufficient to keep the winding-engine at work for several minutes, but the pressure is always kept up until the air safety valve rises, when pumping ceases. The engine is the production of Messrs. Randolph, Elliott, and Co., of Glasgow.

THE MINING COMPANY OF WALES.

In our last Number there appeared an advertisement of an important character, emanating from this company, formed for the purpose of working the splendid slate veins in the well-known Festiniog range of mountains—copper, lead, and silver mines, said to be very rich, and already productive, and for developing the riches of several mountain districts of Carnarvonshire, and the slab quarries in Denbighshire. This company is also now incorporated with the Rhossyd "Penant" of Festiniog Slate, and Denbigh Great Slab Quarries Company. This incorporated company will be conducted by a chairman and board of directors, three to form a quorum; and the prospectus states that as the shares are numbered in order, and made transferable to bearer, the holder will only be liable for the amount held by him. The capital is 120,000*l.*, in shares of 5*l.* each, and if any future calls are required, they are not to exceed 10s. each. The Rhossyd veins have been pronounced by many competent judges to be of the very best quality, and they extend through the Wrysgan estate of great extent, the property of the company, on which there is no royalty, but held on lease at a small yearly rent. In can be worked in conjunction with Rhossyd, under the same local management, with great economy. The Denbigh slab quarries lie three miles from a good shipping place near Conway, are very extensive, and may fairly be said to be inexhaustible. The Blaeny Penant silver, lead, copper, and sulphur mines, have been proved by poor miners to a depth of 7 or 8 fms.; but, for want of machinery to keep down the water, were abandoned. The ores raised, however, paid cost, and they are considered of great promise. The Cwm Orthin silver-lead mines have been proved at shallow levels, and several tons of ore brought to bank, giving 26 ozs. of silver to the ton of ore, and appear of the same character as the celebrated mines of Cardiganshire, the Daren, and Cwm Cymlog. The Gilvach and Cwm Ciprwth Copper Mines are expected to make large returns: at 18 fms. in depth there is a lode 8 ft. wide, well mixed with copper ore and gossan, and carrying a leader 2 ft. wide, nearly solid ore. This mine has already produced several hundred tons of ore at shallow workings, and an adit level has been driven about 12 fathoms lower down the mountain, where it has cut a parallel lode, containing rich copper ore, of great promise, both being supposed to be continuations of the lodes of the Drwsy Coed lodes, producing 1000 tons monthly, at a distance of 990 fms. on their course.

Such are the principal features of the properties about to be worked by this company; and when we consider the metalliferous richness of such parts of the principality which have been investigated, and the immense tracts of country yet unexplored, there is every ground for anticipating successful results. Our immense engineering resources of the present day, as compared with only half a century ago, have so economised the work of mining, and given greater facility for keeping down the water, and making explorations, that with good judgment, economy, and principle, the chances of success are greatly enhanced; and the resources of this company appear to us so great, as to be worthy the examination of capitalists who are desirous of supporting legitimate mining.

At the Dundyvan Iron-works, Glasgow, a new furnace has been erected, which heats its own blast upon an improved principle, and effects a great saving of fuel. This furnace produced upwards of 245 tons of cast-iron in the week before last, and it is fully expected to yield a still greater produce.

IMPROVEMENTS IN SHIP BUILDING.—An event of some importance to the ship building interests is arranged to take place at Greenwich this day; it is the launch of the *City of Paris*, iron built steam-vessel, constructed for the Commercial Steam Navigation Company, and intended to ply with passengers and goods between London and Boulogne. She is constructed from the design of Oliver Lang, Esq., and it is considered by competent judges that she will prove an admirable specimen of the skill of that gentleman. Her principal dimensions are, length between the perpendiculars, 165 feet; breadth of beam, 23; depth of hold, 14; draught, 6½ feet; and her burthen, 425 tons; The vessel and engines are constructed by Messrs. William Joyce and Co., of the Greenwich Iron Works; and as a matter of interest it may be mentioned, that this is the first iron steam-boat ever built at Greenwich, and may be considered the precursor of similar works, creating a new and important branch of industry in that town. Her engines are of the collective power of 120 horses, and are of the direct-action kind. Each piston has two rods, between which there is a recess in the piston which allows of a corresponding recess in the cylinder covers, and thereby permits the connecting rods to descend considerably lower than is practicable in the *single rod* direct-action engine. The arrangement is most compact and simple, and it is manifest that the cylinders being fixed an important advantage is secured. These engines occupy less space than any other description of marine condensing engines yet known, and both engines and boilers may be taken as a fair specimen of the great reduction of space and weight effected by modern arrangements over the earlier examples of steam machinery as applied to naval purposes.

IMPROVEMENTS IN STEAM-VESSEL PROPULSION.—It is a long established scientific fact that the paddle-wheels of steam-vessels are only effective propelling agents until each float board gets beneath the centre of rotation, and that, from that point, as they successively rise to the surface, every float in its turn becomes a retarder of speed. The consequence is that an immense amount of the steam-power is lost, variously estimated by different parties at from one quarter to three-quarters of the whole effective power of the engines. Among the various plans to supersede so expensive and ineffective a machine is a pair of propellers invented by Mr. Lupton, which were offered to the Great Western Steam-ship Company in 1841, and, with some modifications of their engineer, were fitted up in the *Great Britain* before her unfortunate last voyage, in preference to Smith's screw. It is stated that the speed attained in crossing from Liverpool to the Irish coast, on that occasion, had so exceeded the captain's reckoning, that it was the cause of the disastrous catastrophe, making the Irish coast when he thought he was miles away, and it was sanguinely expected that she would have completed her trip to New York in seven days. These propellers are 3½ feet diameter, projecting little more than 2 feet from the vessel's side, and entirely immersed 6 inches below the surface of the water. The inventor calculates that two 10-horse engines, giving the propellers 50 revolutions per minute, would be adequate; and that vessels of from 150 to 200 feet long, with two pair of propellers, and proportionate engine power, would do the work of paddle-wheels propelled by 500 or 600-horse power engines, and reduce the time of the voyage across the Atlantic to seven days. Mr. Lupton confidently considers that 20 miles an hour might be attained under all circumstances, and that as an auxiliary to a sailing vessel, with a fair wind, his plan would attain great speed. That the present system of steam-ship propulsion is highly defective there is no doubt, and should this propeller possess the merits claimed for it, it would be well worthy of introduction by persons who have it in their power to do so. Its having been adopted in the *Great Britain* speaks highly in its favour, and the calamity by which the fair trial to which it was then subjected was stopped, has been probably a great loss to steam navigation.

ECONOMICAL USE OF THE GASEOUS ESCAPE FROM BLAST FURNACES AT IRON-WORKS.

At the meeting of the British Association, Mr. PALMER BUDD made some remarks in continuation of a paper that he had contributed to the meeting at Swansea, in 1848, "On the Value of the Gaseous Escape from the Blast Furnaces at the Ystalyfera Iron-works," in Wales.

Dr. ROBINSON, (the President), in introducing Mr. Budd to the section, said the subject on which that gentleman was about to speak was one of very great importance to the iron trade of this country. According to the present system, an ironfounder in melting a ton of iron sent out into the atmosphere about four tons weight of gaseous products, all of which were entirely lost. Now, Mr. Budd had satisfactorily proved, by actual experiment, that the heat which escaped from the tops of blast furnaces was a matter which the iron manufacturer might turn to material account in the way of increasing his own profit as well as in diminishing the price to the purchasers of that commodity.

Mr. BUDD stated that, since the meeting of the Association at Swansea, he had continued, and with increased success, to apply the waste gases that escaped from the top of blast furnaces to the manufacture of iron; and it was the result of his farther experience applied to the whole of his furnaces (nine in number), since that period, that he now wished to submit to the section. He considered that he could not have fallen on a better locality for this purpose than Scotland, where the iron trade has been developed with a rapidity that is quite surprising, and quite characteristic of the enterprise of Scotchmen: 25 years ago Scotland was of no importance in the iron trade, but, since then, the produce of iron in Scotland had increased to between 600,000 and 700,000 tons a year. In that short period Scotland had accomplished a production which Staffordshire and other places in England took 200 years, and in South Wales 100 years to accomplish—the make of iron in Scotland being now equal to that of either England or Wales. This great accession to the produce of iron has had a most sensible effect on its price: but as he believed that necessity was the mother of invention, and that Nature had in store for us an immense reservoir of riches to be yet developed, he was of opinion that the tendency of all this cheapness was to teach us that nothing should be wasted, and that we should look forward to the time when the smoke that at present contaminated the atmosphere, and the filth that polluted our streets, would be regarded as too valuable to be wasted. When we considered the utility of iron, its low price, and its general distribution in the deposits of every age, we could not but look upon it otherwise than as the great agent in modern civilisation. Mr. Budd then referred to his mode of applying the gaseous escape, and said it was well known that there were two descriptions of furnaces used for metallurgic purposes. The one was the blast furnace, into which air was injected by mechanical means, at a great density, so as to penetrate upwards of 40 feet of dense materials; and the other was the reverberatory furnace, where the fire was produced by means of the draft of a chimney stack. What he had accomplished was by combining these two, so that the gaseous products of the furnace, instead of escaping through the tunnel head, were drawn sideways by a high stack, and passing through the stoves and boilers, leave behind the necessary temperature of the blast and of the steam. In a blast furnace the ores are smelted before the *tuyères* by the conversion of the solid carbon into carbonic acid, which, passing up through the middle region of the furnace into a bath of carbon, was reconverted into carbonic oxide, capable of combining with a farther dose of oxygen. It would be thus seen that the whole of the carbon of the fuel should be present at the top of the furnace in a gaseous form. When the British Association met at Swansea, he had not used the gaseous escape at any great distance from the furnace, his stoves and boilers being very closely contiguous. Further experience, however, had proved that by the aid of a stack at the end of the chain of sufficient dimensions, the gaseous escape from the furnace might be made to travel in the most tortuous directions, descending to the stoves built for heating by the usual fire-places, and traversing the boilers; the only condition absolutely necessary being that there should be an unbroken communication with the high stack at the end, into which the gaseous escape might at last pass, and by which it was drawn forward, instead of passing off wastefully at the tunnel-head. When, however, the draft was carried downward, and to long distances, he had found it necessary to drop into the top of the furnace a hopper or funnel, made of sheet-iron, which acted as a shield at the mouths of the horizontal flues, and prevented them from either being affected by high winds, or from being choked up by materials thrown into the furnace. The reason, no doubt, why this funnel was not applied before was the great apparent temperature at the tunnel-head. In practice, however, it was found that until the gaseous escape mingled with the atmosphere, its heating power was not such as to injure sheet-iron, or even to make it red-hot. In fact, so long as there was an escape upwards, the iron funnel would not be injured. The damage arose during and after stoppages of the furnace, when the blast was obstructed in its passage upwards by the settlement of the materials in the furnace, so that the atmosphere rushed down to meet the ascending gases, and, of course, caused a very high local temperature. His practice was to exclude the atmospheric air as much as possible. The affinity of the gases for oxygen was so great that the air leakage raised the temperature quite sufficient for safety, whilst the full combustion of the gaseous escape would melt down the bricks in the flues, and destroy the texture of the iron tube. It was not possible for him to say what combinations took place at high temperatures, where carbonic oxide, carbonic acid, hydrogen, and nitrogen, were mixed in such proportions. At any rate, he found a smothered combustion to be found the most suitable and economical for the purposes in view. He was happy to say that, at length, the application of the gaseous escape had been tried in Scotland; and that at Dundyvan and elsewhere it was now in successful operation. The peculiar quality of the furnace coal of Scotland being what was called in South Wales "free-burning," which, when put into the furnace raw, coked sufficiently in its descent, gave out an enormous escape, so much so that, upon a rough estimate, he calculated that the waste from one furnace in Scotland was sufficient to heat the blast, and to raise the steam for three. With anthracite coal, the minimum effect was obtained, as it was a dense fuel of nearly 95 per cent. of solid carbon; but in Scotland there would be an enormous surplus at the tunnel-head. He expected, from the well-known sagacity of the Scottish people, that when truly embarked in this mode of operation the greatest possible use would be made of it; and he would not be surprised to see heat let out, like mill-power, for burning bricks and other similar purposes. He felt, however, anxious that the application should be made under the superintendence of competent parties, as he had known several instances where the plan had been abandoned from difficulties that might easily have been surmounted under proper directions. He was quite aware that, by the plan he had pursued, the utmost heat was not extracted from the gases; and that, by different means, a temperature might be obtained capable of performing all the operations of the forge; and if it be true that the solid carbon of the furnace in its escape, as carbonic oxide, would unite with another dose of oxygen for saturation, there could be little doubt that, with properly constituted gas furnaces, there was enough at present passing off to convert the pig-iron into bar-iron. He hoped some of the iron-masters of Scotland would follow up this hint effectually with regard to the remaining processes required for making malleable iron. He observed that the saving at the Dundyvan Iron-works was stated to be about 1¼ tons for each ton of iron produced. Supposing, therefore, 600,000 tons of iron to be the produce of Scotland, and supposing the value of the coal used to be 3s. per ton, the saving that would thus be effected on the make of Scotland, would amount to 112,500*l.* a-year; to which might be added 20,000*l.* a-year of saving in wages and repairs, which would make a total saving of 132,500*l.*, or about 4s. 5d. a ton on the produce of Scotland, which on the present price of 44s. per ton, was about 10 per cent. on the value. If the gaseous escape could be extended to the uses of the forge, a farther saving of three tons of coal would be effected—thus making, at least, a saving of 20s. a ton on all the iron manufactured into bars, sheets, and rails.—*Scotsman.*

THE TUBULAR BRIDGE QUESTION.

Strange enough, this matter has been brought before the British Association; in the Mechanical Section, on Tuesday, a somewhat long and exciting discussion took place, on the claim of Mr. Stephenson to be regarded as the inventor of the design of the tubular bridge over the Menai Straits.

The matter was introduced by Sir D. BREWSTER, who communicated the substance of a note which he had received from M. Jules Guyot, claiming the priority of the invention of the tubular bridge, and contending, it would appear, that English engineers had stolen the idea from him.

Sir CHARLES PASLEY said that Mr. Stephenson laid claim to the invention of iron girders, whether great or small, and upon this he rested his claim to the invention of the tubular bridge. He had seen his first idea, which was rejected by the Admiralty, for its not affording space enough for the navigation of the Strait. His next idea was two oval tubes, resting upon a pillar on the Britannia Rock. He believed that up to this time no idea had been formed of a tubular bridge. The next step was the rectangular form, which was shown to be the best, by the experiments of Fairbairn. He thought that the particular form was due to Fairbairn, while he believed the original idea of the tubular bridge to be due to Stephenson.

Sir D. BREWSTER observed, that if Stephenson admits, which he seems to have done, that the invention of the girder was the invention of the tubular bridge, then it certainly did follow that, just as a telescope of a foot long was as much a telescope as that of Lord Rosse's, the invention was due to Stephenson. He did think, however, that Stephenson had claimed too much, and the risk was, he would get credit for less than was his due.

Dr. ROBINSON remarked, that if the letters arising out of the controvery touching this affair between Stephenson and Fairbairn were to be relied on, he certainly did think that Stephenson had extended his claim too far. It did appear to him (Dr. Robinson) that up to a late period Mr. Stephenson had no idea at all of any other than the tensile force, and that the resistance to a compressive force had not yet entered his mind.

The ASTRONOMER ROYAL expressed his great regret that a controversy of this kind had been admitted into the British Association. He protested against all discussions of this kind as being foreign to its objects, and calculated in no small degree to disturb the harmony of its deliberations.

Sir D. BREWSTER having been boldly told when in France that the idea of the tubular bridge had been stolen by the English, he felt bound to defend his countrymen from such an allegation. He did not see why the discussion could not be conducted in kindness, and with the simple idea of determining the truth. He could not sympathise with the Astronomer Royal in his protest against such discussions being entered upon in the British Association.

Here the discussion was likely to become so warm, that Dr. Robinson, the President of the Section, brought it to a close, much to the regret of many present.

IMPROVEMENTS IN MANUFACTURING STEEL.

Mr. Edward Riepe, Finsbury-square, has recently secured a patent for some improvements in the manufacture of steel,—of which the following are the particulars:—

1. The inventor places 280 lbs. of pig-iron in a puddling-furnace, and heats it till it melts; then throws in from 12 to 16 shovel-fulls of cinder slack, and partially closes the damper. When the iron begins to trickle down, 40 lbs. of pig-iron are placed on cinder beds near the bridge, and the damper closed. When this last melts and begins to trickle down, it is raked into the melted metal below. The damper is then three-parts opened, and the heat continued until it boils, and the well-known blue flames shoot through the cinder slack. The heat is maintained at cherry red, the damper opened, and the mass puddled to and fro under the cinder slack. When the mass begins to granulate and the grains to fuse, the damper is closed, and the operation watched; when the boiling ceases, the mass assumes a waxy appearance. The fires are then stirred to keep up the temperature, and a portion taken out in a ball, and tilted or otherwise hammered into shape. In the case of pig-iron made from scrapy ore, he adds only 20 lbs. of pig-iron, instead of 40 lbs., at the latter part of the process; when using refined Welsh iron, he strews the floor of the furnace with 10 lbs. of best dry granulated clay, and covers the metal with a like quantity of clay.

2. The patentee casts pig-iron, or alloys of pig-iron and wrought-iron, into bars, with notches to facilitate their breaking. They are then covered with clay, and arranged with spaces between. The furnace underneath is lighted, and all the apertures closed except the flue and a small one, which is temporarily closed, but may be opened when required, to allow of a sample being withdrawn to ascertain how the operation proceeds. When the conversion of the iron bars is effected, they are removed, and the clinkers, &c., knocked off.

3. Or the iron may be placed in a fire-proof cylinder of stone or earthenware, which is heated by a furnace placed underneath, and has its two ends closed with a pipe attached to each. The fire is lighted, and the iron heated to redness. The pipes are then opened, and the air will pass through, and from the manner in which the bars are arranged, will come into contact with all their sides. When the annealing is completed, the iron is cooled down and removed.

Claims.—1. [As regards the conversion of pig-iron into steel.] Regulating the heat in the finishing; the exclusion of atmospheric air from the mass; the use or addition of pig-iron at the latter part of the process.

2. Converting pig-iron or alloys of pig-iron and wrought-iron into steel, by exposing them to the action of clay at a proper temperature.

3. The peculiar method of annealing bars of pig-iron, or alloys of pig-iron and wrought-iron, by exposing them to atmospheric air when at a red heat.

ASTURIAN MINING COMPANY.

The following is an abstract of the contract with M. Leon Lillo for the disposal of the company's property in Spain:—

The deed is dated the 15th of June, and purports to be executed by Mr. William Campbell Gillan, of Bayswater, Middlesex, on behalf of the Liquidating Committee of the Asturian Company, and of Messrs. Samuel Amory and William A. Wilkinson, having the same powers with him of the one part, and Mr. Charles Sacchi, on behalf of M. Leon Lillo, of Paris.

It recites the formation, progress, and dissolution, and a proposal for the sale of the works on the following conditions:—

1. The whole of the company's property in Spain is transferred, without exception, to M. Leon Lillo.

[The supplemental deed provides that the consignments made prior to the 16th of June shall remain for the Asturian Company—that all stock manufactured or consigned subsequently to that date shall be for the account of M. Lillo—he paying the expenses of the establishment from that date, and that certain machinery belonging to the Asturian Company in London shall be taken at the invoice price.]

2. £6000 is to be paid by M. Lillo on the ratification of the contract; 14,000*l.* by bills, at three and six months, to be delivered on M. Lillo's receiving possession, which, with the advantages reserved in the new company, is to be the consideration of the sale.

3. Possession is to be given without delay, after the payment of the 6000*l.*, and

4. The administration of the establishment is to belong to M. Lillo.

5. A provisional company, according to Spanish law, as M. Lillo may deem advisable, is to be formed within three months, to be converted within one year into an anonymous company.

6. M. Lillo reserves the power of drawing out, as he may deem most advisable, the statutes for the provisional and anonymous companies, subject to the following stipulations:—

[By the supplemental act these statutes are to be subject to the approbation of a majority of the committees of management of the new companies respectively—M. Lillo appointing three out of five, or two out of three.]

Stipulation 1. The administrators shall not exceed five in number.

2. Of which two of five, or one of three, shall represent the Asturian shareholders in the provisional and first committee of the anonymous company.

3. There is to be an agent in London, to whom will be sent the abstract of accounts, &c. &c.

4. Votes may be given by proxy in the hands of other qualified shareholders.

5. The term of partnership is 30 years, with power of extension, by the vote of two-thirds of the general meeting.

6. The anonymous and provisional companies are to be on the following bases:—

Basis A. The capital is to be 160,000*l.* (16,000,000 rs.), in 16,000 shares, of 10*l.* each to *bearer*. If required to obtain the Royal sanction of the statutes of the anonymous company, or to constitute the provisional one, the shares shall represent each 1-16,000th of the joint-stock, suppressing the nominal value.

[A company thus constituted is not subject to the law regulating public companies in Spain, and are declared to be under unlimited responsibility for debts by R. O., 8th May, 1848.]

B. 8000 shares are to be allotted to the Asturian Company, to complete the price of purchase, but not to be delivered till all their debts are paid—the dividends, in the meantime, to accumulate for their benefit.

[The supplemental act varies this;—the 20,000*l.* is to be paid to Messrs. Amory, Gillan, and Wilkinson, as trustees, and when they certify that it has been so applied, the shares are to be handed over for distribution.]

The remaining 8000 shares are to be allotted to M. Lillo *pro rata*, according to his payment of the said 20,000*l.*, and a further sum of 15,000*l.* to be applied as wanted for the new company—the dividends in the meantime accruing for his benefit.

C. 3500 of M. Lille's shares are to have preference over the other 12,500, in respect to a preferential interest, and in the division of property on dissolution.

D. The directors of the new company shall receive no salary—*save* what may be allowed by the statutes, and their travelling expenses.

E. On the 30th of June the inventory of property and balance-sheet shall be made out, and the excess of receipts over expenditure shall be the net profit.

F. A preferential interest of 6 per cent. on the 3500 shares (basis C.) shall be first paid, and if profits not sufficient, it is to be guaranteed as a debt of the company; then 6 per cent. is to be devisable upon the other 12,500 shares; and the residue of profits are to go as follows:—9 per cent. for each director, as the direction may be three or five, and 6 per cent. may be distributed amongst the *employées;* 10 per cent. to be set apart for a reserved fund, till it reach 20,000*l.*, and the surplus to be divided equally on all the shares.

G. If in the fifth year the net profits shall not have exceeded 6 per cent., the company may be dissolved by a resolution of two-thirds of the votes at a general meeting.

H. Powers to increase the funds, or capital, and to amalgamate with other companies, are to be reserved by the statutes.

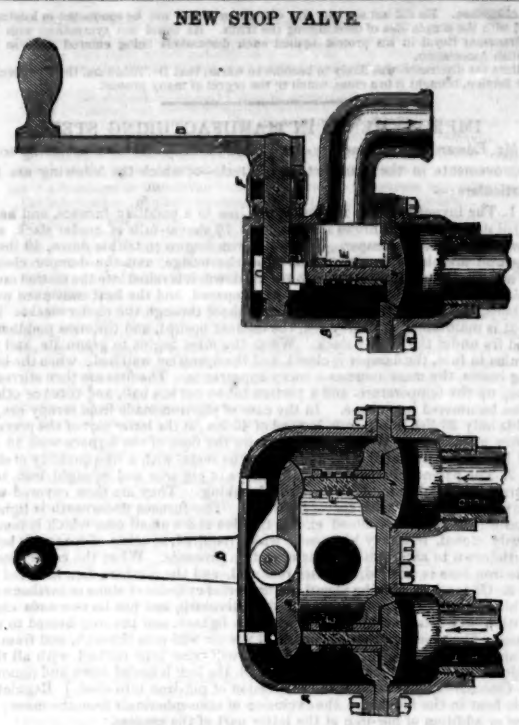
[By the supplemental act these powers are to be subject to the decision of three-fourths of the votes at a general meeting, to be advertised two months previously.]

Condition 7 provides that matters in dispute may be decided by arbitration, according to the provisions of the Spanish code, at Madrid, the seat of the direction of the new company; and the last condition reserves the ratification for the general meeting of the Asturian Mining Company.

WROUGHT-IRON FOR WIRE MAKING.—Wire-iron should be strong, hard and tough. That which is fibrous, but not strong, is of no use; the wire made from it will be rotten, and without lustre. Where fibrous iron is employed for this purpose, the fibres must be very fine, and the colour of the iron white. If the iron is bright, coarse fibres make rough scaly wire; but if it is fibrous, and of a dull colour, the wire will be both rough and rotten. Iron rendered cold-short by silex or phosphorus is not adapted for wire manufacture; but when rendered cold-short by carbon, it will form, for this purpose, the most advantageous material available. Iron which is hot-short on account of sulphur is very apt to break in drawing. That which is hot-short in consequence of a deficiency of impurities is a still worse article. Very pure iron is so weak that wire cannot be made from it. The strongest kind of wire is made from an iron which contains just sufficient copper to make it decidedly hot-short. Wire-iron must be very uniform in its aggregate form; that is, the billets from which wire is to be drawn must have a uniform texture throughout. It must not be a conglomeration of fibrous iron, cast-iron, and steel. It requires dextrous workmen to make a good article, even from excellent metal. The Catalan forge is not adapted for this purpose, even though the iron should be the product of the best of all materials; it does not work with sufficient regularity. White coke or anthracite metal will not make wire-iron, even with the greatest attention, and in the best charcoal forge. Very nearly the same may be said of hot blast and white charcoal metal, smelted from the poorer ores of the coal formation, and bog ores. White metal from the rich magnetic ores of New York, New Jersey, and Missouri, answers excellently, if carefully worked in a charcoal forge. The best wire-iron is made in the puddling furnace, from cold-short grey charcoal pig, or from any grey pig-iron, whether charcoal or anthracite, provided the metal is of such a quality that no difficulty results from boiling it. Neither the best nor the inferior qualities of white metal will make good wire-iron in the puddling furnace. Iron of fine grain, or fine fibre, of uniform texture, great lustre, and of a somewhat bluish colour, and soft as well as very tenacious, is that upon which our principal reliance must be placed. From this, it is evident that wire-iron may be most profitably made in puddling works where boiling is well managed. In such establishments, the finest and strongest rough bars may be reserved for wire-iron. A selection may be more safely made from billets than flat bars; and cold-short is to be preferred to fibrous iron.

At the meeting of the Electric Telegraph Company, on Friday, the 2d inst., a dividend of 1*l.* per share was declared for the half-year.

NEW STOP VALVE.



The following invention has been registered under the Act for the Protection of Articles of Utility, by Messrs. William Pope and Son, of the Edgware-road, engineers:—

A is the valve-box; V Y, the valves, both of which open downwards; B, a cross lever that acts on either valve according as it is pressed down at either side by the spindle, C; D, handle to the spindle, C; E E, springs attached to the top of the valves, by which they spring back to their places, after the pressure of the lever, B, on either valve as removed; F, a vulcanised collar of India-rubber, by which a water and air-tight junction is made between the spindle, C, and box, A; F, a metal pin, by which the spindle is prevented sliding on the flange of the box A.—*Mechanics' Mag.*

THE COAL TRADE—TRAFFIC.

BY BRAITHWAITE POOLE, ESQ.

[We have before noticed a very able report on the coal traffic of the country, which was prepared by Braithwaite Poole, Esq., for the directors of the London and North-Western Railway; but as the information it contains possesses much general interest, we avail ourselves of an opportunity of presenting the principal portion of its contents to our readers, as worthy perusal, and as forming a good accompaniment to that gentleman's report on iron ore, published in our Journal a few weeks ago.]

The coal traffic of Great Britain, being the largest of any description probably in the world, merits especial attention; therefore it is necessary briefly to capitulate a general outline of this important trade.

It is stated by geologists, and admitted in the collieries, that the capability of supply is almost unlimited, and that there are drawing engines already working with power sufficient to raise 30 per cent. more coal than is brought up. There are upwards of 3000 coal mines in Great Britain, which employ nearly 250,000 men, women, and boys, underground and above, termed hewers, putters, trappers, overlookers, bankmen, &c. The capital invested in working stock, tramways, staiths, and harbours, altogether exceeds 30,000,000*l.* in value! and the "get of coal," as it is technically termed, amounts to 34,000,000 tons annually, the estimated value of which, at the "pit's mouth," is 10,000,000*l.*!

Of this enormous quantity of coal, one-third is raised in the Northumberland and Durham districts, from whence the chief exports of the kingdom are made by the rivers Tyne, Wear, and Tees, both foreign and coastways. The chief points of home consumption are in the iron works of Staffordshire, South Wales, and the West of Scotland; which, together with the lesser works of North Wales, Shropshire, Yorkshire, and Derbyshire, consume nearly one-third of the whole. The residue is consumed in smaller manufactures generally, such as those of cotton and woollen, the salt works, &c., and by the populations of large towns for domestic purposes. The Lancashire coal field produces about 4,000,000 tons annually:—Wigan, 2,000,000 tons; Bolton, 1,000,000; St. Helen's 1,000,000.

I have tested all these calculations in detail in several different ways; *e.g.*, by the Custom-house and parliamentary returns and evidence, by the acknowledged vends of the various districts, by the admitted number of operatives employed underground, and by the books of the Statistical Society of London.

From all the inquiries I have made, it would appear that the total cost of getting, raising, and shipping coal in Durham, averages about the same as in Lancashire; and the reason of the Newcastle and Durham district enjoying the benefit of exporting the preponderating quantity—say, 8,000,000 tons—is mainly attributable, not so very much to the quality as to the great facilities afforded there by means of railways, tramways, and staiths, made direct to and over the vessels' hatchways at Newcastle, North and South Shields, Sunderland, Hartlepool, Middlesboro', &c., where the operation of loading a ship with coal occupies only as many *hours* as it would require *days* in Liverpool.

The system of hoisting coals out of a flat over the side of a vessel, and swinging them into the hold, is destructive and bad in every respect; it turns the "coal" into "slack," and the tediousness of the operation generally produces a serious detention of the vessel. Carting coals from a canal or railway to load into a vessel is equally bad. The correct principle, for dispatch and economy, is dropping the coal expeditiously, yet gently, out of the same wagons which are sent from the pits' mouth, by leverage, direct into the vessel.

Thus, whilst the coal proprietors of Durham have all been on the *qui vive*, and created their gigantic traffic, an incomprehensible supineness appears to have been manifested by all parties interested in the coal trade of Liverpool. The Leeds and Liverpool Canal Company stopped short of the very point with which their navigation should have been connected—the Princes' Dock—and the coalowners remained in a happy state of quiescence.

The prosperity of the town and trade of Liverpool would be amazingly increased in every way by a large export of coal, which it is my desire to promote; but in consequence of the East Coast facilities, any one of those comparatively small seaports export ten times as much coal as the great port of Liverpool.

But the Liverpool returns through the Custom-house are evidently only partial, inasmuch as there being generally no duty payable upon coal, the clerks of ship-owners and ship-brokers are regardless of the exactitude of their entries of the weights, which are never checked by the Government authorities. I know of one firm in Liverpool, who alone export 1000 tons of coal weekly. Coals are exported *duty free* to British possessions, and to foreign countries in British ships, or in foreign ships entitled to the privileges conferred by treaties of reciprocity; but a duty of 4*s.* per ton is chargeable upon coal exported in foreign ships, disentitled as above, and the total amount of such duties received during the last year, 1848, was 4363*l.* 18*s.* 10*d.* only.

In Liverpool, the dock dues chargeable upon coal are 2*d.* per ton, and town dues 1*d.* per ton; together, 3*d.* Vessels at Hartlepool and other ports on the East Coast, are frequently cleared out at the Custom-house before loading; and as a chaldron of coal, though computed at 2 tons 13 cwts., more frequently weighs 2 tons 15 cwts.; it is well known that the actual quantity exported from thence far exceeds the amount of tonnage registered in the Custom-house.

The policy pursued on the York, Newcastle, and Berwick Company's line, was to purchase the waggons and engines from every coal proprietor, and transact the whole business themselves; whereas other railway companies prefer that the coalowners should build and keep each their own stock of waggons, thereby uniting their capital and interest with the prosperity and well working of the line. Much controversy has from time to time appeared on the policy of railway companies carrying coal, and the profit derived therefrom; but few persons fully comprehend the subject. The distance run, together with the description of waggon, for example, are elements of great importance. I have watched the traffic carefully for several years past on every line in the kingdom, and am decidedly of opinion that a long heavy traffic, run at slow speed, even at very moderate rates of charge, will produce more money for dividend than the traffic of an express passenger train. But let us not be deceived in the expense attendant upon creating a large coal traffic on a railway. Look at the Darlington station, where 11 miles of sidings are required and laid down to accommodate the traffic! If we increase our coal trade, a corresponding increase of sidings may be required.

The tolls and charges made by railway companies vary considerably, from ½*d.* to 3*d.* per ton per mile. The proper mode of making charges to encourage the traffic, I think, should be at so much per train of so many waggons, according to distance, gradients, and other circumstances. The mode of transacting the business varies in like manner in different districts. The York and Newcastle Company, for instance, charge 3*d.* per ton "cell rent," and do all the business themselves, which includes clerkage, porterage, unloading, shovels, selling, and receiving payments, on delivery of the coal to the public. Again, the Manchester, Sheffield, and Lincolnshire Company charge 3*d.* per ton, wharfage alone, whilst the Edinburgh and Glasgow Company charge nothing for wharfage. The charge for demurrage of waggons also varies. Some companies allow 24 hours, others 48 hours, and afterwards charge 1*s.* to 5*s.* per waggon per diem! Upon our own line, the London and North Western, the charges are not uniform, different districts having been accustomed to different usages; in the south the coal is stacked at the stations, whereas, in the north, it is invariably removed on arrival.

I do not see why London should not now be supplied in part from the Lancashire coal-field, there being quite as good coal for household purposes in Wigan as in Durham, and much better gas coal.

The Ince Hall Company would put upon the line at Wigan, any time to suit convenience, full train loads of Cannel for London, a description of coal chiefly consumed in gas-works. Supposing they send even small trains of 30 waggons, 5 tons each = 150 tons, it would yield 75*l.* per diem, which sum they would pay to us immediately, if a regular trade and communication were established. In like manner, the Clay Cross Company are ready to put 1000 tons *daily* upon the line, if you will only take it. Look at the profit!

We may contemplate the lines of rail between Wolverhampton and Birmingham, five years hence, as being situated in the very centre of the Staffordshire coal-field, inasmuch as the collieries in the neighbourhood of Dudley are now nearly all worked out and full of water, causing new shafts in succession to be sunk on either side of the line; therefore, it is reasonable to assume that we shall command an extensive traffic in coal from that district, if the necessary facilities be afforded for its development. But extraordinary prejudices exist in the minds of consumers in different parts of the country, according to custom. Take, for example, Birmingham, where a white ash coal has always been burned, the population absolutely decry a brown ash coal, whilst in London a white ash coal is not tolerated; hence the necessity of appropriating expedients according to circumstances.

To elucidate technicalities, there are generally three descriptions of coal, large (best), round (common), and small (slack); the first is used for house coal, the highest charge for which at the pit's mouth is 7*s.* 6*d.* per ton, and is called in Lancashire "King coal," "or Orrell coal." The second is used principally for engine purposes, the price of which, at the pit's mouth, is 4*s.* 8*d.* per ton, and is termed "burgie," "rounds," or "nuts;" and the third is the refuse, or "slack," sold for smithies and brickfields, at 3*s.* per ton at the pit's mouth; these constitute the whole, although they may be smashed or riddled, and then called "2nd quality."

There are many gentlemen of the highest respectability and integrity engaged as agents in Liverpool for the coal proprietors of Lancashire, but there are also some "black sheep" amongst them. An enlightened coal dealer is a brilliant flame, and he knows as well how to mix his coals, as a grocer does to sand his sugar, or a flour dealer to mix his seconds and thirds with his firsts. A thrifty housewife buys a load of "best King coal," and receives one half "burgie" or "nuts;" whilst a smart captain of a vessel orders 50 tons of engine-coal, and innocently "rounds up" one-half the "slack" of it.

Another mode of finesse, is to issue two printed tickets with one and the same cart-load of coal—one ticket for the actual weight passed over the machine, say 35 cwts., and the other ticket for 40 cwts., the latter being substituted, whenever practicable, to the recipient, for the former. Thus the respectable and honest agent is placed at a great disadvantage with his wily antagonist, *le petit charbonnier*.

Nearly 100,000 carts were loaded and dispatched from Crown-street, Liverpool, with coal during the last year. The advantages there, over the other termini of rail or canal, are in one horse being able to move down hill almost the same weight as two horses up hill. Besides which, the breakage is calculated at 5 per cent. only, against 5 to 15 per cent., through riddlings and loss. At Liverpool-road station, Manchester, by a trifling outlay, the consumption of coal may be trebled immediately; there being plenty of room and accommodation over the timber-wharf for drops of a convenient height to be made.

Having thus shown the capabilities and advantages of extending this trade, I now beg to recommend that every possible encouragement and accommodation be afforded by the railway company to the coal proprietors and their agents for the promotion of it.

MINERAL VEINS, &C.—Every mining district has its conducting metalliferous channels, cross-courses, or feeding pores; and the whole accumulated evidence obtained in all parts of the world, clearly proves the fact, that the contents of the veins, or lodes, depend on the character of the rocks they traverse, as represented in the sketches. It is of great importance to bear this fact in mind, because veins, which have been particularly rich at one place, have often led persons to suppose that the continuation of the same lodes must lead to equal riches, although such lodes may intersect barren rocks. After the discovery of rich mines, it was supposed that the adjoining setts would be equally productive; but old mining proprietors have, long ere this, been undeceived. To bring forward a sett to the notice of the public on the strength of its being situated near a good mining district is very deceptive. Every mining establishment ought to be in possession of maps, showing the general bearing, undulations, and variations of their respective productive bands of ground, with the elvans and other rocks, carefully laid down in a correct map by their agent—without which the explorations and selection of setts must be attended with great risks. Guess work, "where it is, there it is," is an extremely bad principle to go by, even with a good practical miner; but, when exposed to abuses and changes of agents, &c., the consequence may be easily conceived. After incurring great expense in carrying on works through unproductive rocks, mines have frequently been abandoned, when within a few feet of a bunch of ore, for the want of knowing the character of the ground, flookans, slides, &c. On the other hand, works are carried on in unproductive ground at a great cost without a chance of success, simply because the lode happens to be in the same direction as a neighbouring rich mine, or some other vague and indefinite indications; therefore, the practical knowledge of experienced miners reduced into a principle, so as to establish rules to avoid useless explorations, and lead to the discovery of the richer deposits, are objects of the greatest importance. It is essential to the interest of every mining proprietor to know the general character of the dissemination and local concentration of the minerals in the district, and indispensable to him in forming a judgment of the value of his property, and the mode of working adopted by the miner, to guard him from being led away by loose reports. The more closely and minutely the investigations are made, the more convincing are the results of this grand law of Nature; therefore, this general principle of metalliferous crystallisation may be safely applied to any mining district in every part of the world, to enable a person to know where the minerals have been principally accumulated, and where scarcity of minerals prevails. These laws of terrestrial physics, are, therefore, obviously of vast importance to the practical miner; and the elucidation of the subject to the furthest practical extent is the greatest desideratum which now remains in the science of mining, since the operations carried on for the discovery of minerals not only constitute one of the heaviest expenses of mines, but it is the vague and precarious result of these trials which chiefly stamps the proverbial character of hazard and uncertainty which is attached to the pursuit.—*Hopkins's Geology and Magnetism.*

THE BENEFICIAL EFFECTS OF HOLLOWAY'S PILLS IN LIVER COMPLAINTS.—A gentleman who resides at Dhobah Factory, near Culnat, Calcutta, writing to his father, James Nichol, Esq., 15, Rathbone-place, Oxford-street, states that he suffered very severely from a liver complaint, and a dreadful pain in the side, and that he has derived more benefit from taking Holloway's Pills for a short time, than he was able to obtain under the treatment of several medical men in India for 17 months previously: therefore, officers in the army, and others who through living in hot climates are martyrs to disordered stomachs, liver complaints, or indigestion, should take these invaluable pills, being a safe and effectual cure for those diseases.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

Original Correspondence.

VENTILATION OF COAL MINES BILL.

SIR,—I solicit your courtesy and candour to insert in your widely circulated and able Journal the following observations on the report you have given to the public of the second reading of the Inspection of Coal Mines Bill in the House of Commons:—It seems to me quite impossible the Secretary of State (Sir G. Grey) should have been so ignorant (I will not say wilfully mistaken) of what passed in the House of Lords on the debate on this Bill, as to assert "the *necessity* of the Bill had been *universally* admitted; the Bill had received much consideration in the other House, in which there were large coal mine proprietors, and he had also received statements from the most important coal miners in the country approving of the Bill in its present shape." Now the petitions against the Bill on the table in the Commons will prove it is far from *universally* approved. The only two coal proprietors that spoke in the House of Lords were Lord Lonsdale and myself. Does he pretend (the Secretary of State) that we were in favour of the Bill? Does he not know we have more stake in the coal trade than those with whom he has communicated? In whose charge was the Bill in the Lords? Lord Carlisle's, who can, with all his ability, know nothing of the working of collieries in Northumberland or Durham. Why was the Earl Grey and the young Earl of Durham not ready to uphold the measure? Can it also be supposed or believed that Sir George Grey did not know or hear of the powerful address of Lord Brougham on the Bill, who, with more than his wonted ability, investigating and searching powers, went into all the inextricable evils that must arise from legislative interference in the ticklish and very nice operations of the workings and discipline of the deep and intricate coalpits of the north of England? Was it fair, then—was it just—above all, was it consistant with fact for the Secretary of State (always presuming your reporter was accurate) to make such a statement of universal support as I have noted to the Commons House of Parliament? Fortunately, I perceive, Mr. Disraeli expressed his great surprise, and most ably exposed the determined opposition it had been met with by extensive coal proprietors, and energetically and wisely pointed out that, instead of bringing in such an important Bill in the last hours of the session, when so many legislators had left their duty, and only Government placemen remained, a delay, at least to the next session, was absolutely imperative and necessary. The member for Gateshead need not have challenged the member for Buckinghamshire to state the coal proprietors who were in opposition to the Bill. The House of Lords debate pointed out this fact clearly, but certainly did not reveal to the House the representations Mr. Hutt had received from the most important coal-owners of the north district—superior proprietors, no doubt, to those noble personages who headed the opposition in the Lords. I cannot but observe that it is somewhat singular that both Lord Londsdale's and Lord Brougham's most singularly able speeches were scarcely reported in any one of the papers, and there seems to have been a studious attempt in some quarters to stifle the real demerits and mischief of this Bill under the influence of the political economists, philanthrophists, and ultra-humanity conceptions and feelings.

In conclusion, Sir, I beg, through the medium of your Journal, to protest in the strongest manner, as the principal coalowner in Durham, against the principle of this unwise and injudicious Ventilation of Coal Mines Bill. No amendment in committee will overcome its meddling and vicious effects in the interior administration of the intricate workings underground in the pits. It will create endless contention and squabbles between the Government inspectors and the viewers charged with the active duties of the mine below ground. The *imperium in imperio* in such positions must have fatal effects, and it will have accomplished no other result but adding the patronage of coal mine inspectors to the office of the Secretary of State. In addition to my solemn protest, I hereby publicly declare that if ever any inspector shall interfere in the working of our pits, in any manner, with my appointed agent and viewer, I shall charge upon such inspector and the Government all the consequences of any and every accident that may occur; and I shall make known to all my colliers that I will never (as heretofore) provide for and domesticate on the colliery premises, for ever, as we now do, the wives and children of those who may be left destitute by any explosion or accident that under the Government direction shall arise. The large sums now borne on our books for maintaining those who, from unavoidable accidents, become paupers and burdens on the concerns, may be henceforth borne by the Government (as well as all losses and damages in the pits), as that enactment which seizes the management of private property, and interferes in its control, ought to provide for all consequences; and I trust the House of Commons will shape out due provision accordingly. And, further, I humbly but respectfully declare that I will submit to all the penalties of the Bill rather than yield to the monstrous injustice of allowing a Government inspector to survey with his people, and take plans of my underground and old workings; nor will I yield to any charges and costs for maps and plans of my extensive coal-fields at the *ad libitum* direction of the paid inspector, who will like no better business than placing the trade in absolute confusion. Employing, as we coalowners all do, for our people's safety, our own interest, the preservation of life, and the wealth of our concerns, the ablest and most scientific viewers and practical men in the trade, nothing but absolute compulsion and force will induce me to surrender the property I preside over unto others. VANE LONDONDERRY.

Seaham Harbour, August 5. ———

MINE INSPECTION.

SIR,—I shall be rather satisfied than otherwise if Mr. Richardson ceases to criticise my letters, unless he will attempt to invalidate their facts, in place of confining himself to mere personal observations. He commenced the attack; and if he now sees it prudent to draw off his forces, I can have no objection. In truth, he has never ventured an assault upon any of my strongholds; but, like Rabshekah, he has railed at a distance from the wall for the people to hear. He has grumbled at my weapons, and complained of my mode of fighting; but he has done nothing more. He has asserted the overwhelming force under his command, but he has not brought it into action; and, at the last, has taken up two of my own expressions—"evasion" and "misrepresentation"—and thrown them back upon me, as if he had no arrows in his own quiver; but these even he has not handled rightly, for the points are still directed towards himself.

Upon two points, however, I must reply. Mr. Richardson assures us that he does not believe inspection will extinguish danger. Why, then, has he asserted that the lives of a valuable and industrious race will be saved by inspection? for if it does not extinguish danger, it cannot save the race. He ought not, therefore, to have made an assertion, the equivalent of which he does not believe. I call upon Mr. Richardson, if he wishes his future statements to be believed, to retract this scandalous accusation—that the opponents of inspection are the cause of a ruthless sacrifice of lives. I have adhered to one statement throughout. Your readers who are conversant with the fair working of a colliery, or an argument, must judge to whom the charge of "evasion" ("miserable," or not) is due. As to the "manliness" which Mr. Richardson lays such stress on, I cannot see, if the arguments I have used are good, that it matters in the least whether I am a man or a woman. If my language is "ungracious," that is my misfortune. We are not all gifted equally with the same graces. The honesty of my purpose must be taken in amends for the defect. The second point on which I have to reply is Mr. Richardson's improved arrangement for ventilation. He is always in a great hurry to assume some unfairness on my part, and now charges me with "purposely avoiding" a detail of the facts, through a "spirit of misrepresentation." I thought my last letter quite long enough as it was; but in this I will endeavour to satisfy his love of "candour." I have already stated I know nothing of Mr. Richardson, except by his communications in your columns; it, therefore, follows that it was only there that I derived any acquaintance with the improvement in question. The prominent point of it to which I referred was not the "enlargement of the *upcast* and *downcast* shafts," which is a very vague and indefinite proposal, rather difficult to apply to collieries in existence, involving a great many other considerations—in fact, containing no principle either right or wrong; but an enlargement of the *upcast shaft*, so that it might be *larger* than the *downcast* in proportion to the expanded volume which the air has acquired from the heat of the furnace and of the workings. This is the part of the paper which I criticised as erroneous at the time of its publication in your pages. Mr. Richardson, it appears, did not read my remarks; but he might easily have seen them, as one or more of my letters were headed with his name. Moreover, Mr. Dunn stood sponsor to his error, and adopted it in condemnation of the upcast air channels, described by Mr. B. Gibbons in his very able and temperate pamphlet on the *Ventilation of the Staffordshire Thick Coal Mines*, which work, as you will remember, called forth a most extraordinary and virulent host of assailants. In reply to both these inspection advocates, I explained how entirely opposed to physical laws this proposed expansion of the upcast shaft would prove. I am not sure which of my opinions Mr. Richardson's concluding quotation is intended to overthrow. If it is my opinion against inspection, the Institution of Civil Engineers must very rapidly have changed its mind, because a few weeks before his paper, which he says "*first introduced the subject of inspection to his professional brethren in their collective capacity*," was read, a very decided opinion *against inspection* had been expressed in an animated discussion on the above-named pamphlet of Mr. Gibbons; but if the quotation is intended to assert that the practical error which I have condemned has received the sanction of the Institution of Civil Engineers, I can only answer in the trite, but often appropriate, quotation—*Bonus Homerus aliquando dormitat.* I will believe that the engineers have really investigated and approved Mr. Richardson's improvement in ventilation, when I see locomotives steaming along, with funnels of diameter wider than the guage, so that their area may be as many times larger than the area of the fire-bars, as the air has acquired expanded volumes by its passage through the fire—when I see this, I shall believe that a medal was given for the improvement in question, and not for "the general useful character o

the paper." The truth is the Institution committed a clear oversight in passing over this error. Such oversights do and must occur in public bodies, where the object is more to give an agreeable reception to such acquisitions as individuals take the trouble to communicate, than to exercise a stern and unpleasant criticism on the details submitted to them; and this is one of the numberless arguments against inspection of mines by any public body, because it ceases to be the office of any individual to look so narrowly into a proposal as a private man must do, whose business is affected by it. It becomes a branch or species of *joint-stock management*, and we can summons plenty of witnesses, with bitter experience during the past three years, to prove how collieries and such things get on by *joint-stock management*. A public inspection in Britain will always be as inferior to private inspection as the fruits of these public companies have been inferior to the results of private enterprise. Now, Mr. Richardson must not suppose that all these remarks are made merely on his account. When I am led into remarks apparently of a personal character, I have always in view a much further object, of more general consequence. The individual who holds a false opinion is to be regarded merely as a vessel containing a substance which has to be submitted to a test. As a chemist may have a number of solutions in separate vessels, which to distinguish them are lettered from A up to R; so the vessel containing the opinion I am now testing is lettered R, or Richardson; and he should remain passive in my hands for the sake of the value of the subject of which he has made himself the vehicle. The correct theory of the construction of the upcast channel, when rarefaction by heat is the ventilating power, is very important in its influence on results. It is generally understood and acted upon in the construction of chimneys; but since Mr. Richardson and others condemned the application of the true principle to the ventilation of collieries, and I explained their error, I have frequently seen letters in your columns advocating a false arrangement. As the subject is an essential element in the due and economical application of ventilating power, I have been endeavouring to call attention to it by bringing Mr. Richardson by degrees fairly out on the point. And some repetition seems to be necessary, because it appears he did not notice my correction at the time; but, so long as we reach the right point at last, the difficulties of the journey, and any slow and unwilling approaches to it, must be excused; and the subject coming forth at length, decorated with a medal, will, no doubt, receive the attention which was equally due to its intrinsic importance.

Let a downcast shaft be supposed of 100 ft. area, and assume the air in the upcast to be heated to double the volume. This is much higher than is actually done; but it may be assumed, to make the comparison more clear. In order that the upcast may be enlarged in proportion to the expanded air, the area must be made 200 ft. The moving power is the weight of the column of atmosphere, superincumbent upon the downcast area of 100 ft.; but the weight of the column of atmosphere over the upcast will be exactly *double the weight of the moving power*; the column of heated air issuing from the upcast shaft will, therefore, have to force its way against an obstacle exerting double the power which itself possesses. Had we not fluids to deal with, this would put a stop to the motion altogether; but, from the properties of fluids, the current will only be greatly impeded. Each particle of light air will rise slowly between the particles of dense air, and there will be a certain amount of circulation. It may be assumed this retardation will be twice as great as would be due to an upcast of equal area to the downcast; the enlargement will, therefore, in this one item, cause a loss of half the ventilating force. The next source of loss is this—the ascending shaft being enlarged in proportion to the enlargement of the air, the velocity of the air current upwards will be identical with the velocity of the current downwards.

But the specific gravity of the air will be diminished one-half, and momentum being composed of weight, multiplied into velocity, it follows that the air rising to pierce the superincumbent column of dense atmosphere will strike it on equal surfaces, with only half the momentum which would exist if it were issuing from an upcast of 10 feet, at double the velocity of its descent in the downcast. The upcast, therefore, ought to be *narrowed* instead of *widened*, in order that a compensating velocity may be given to the light air, to enable it to make an effective exit against the atmosphere. Were the area of the upcast reduced to 50 ft., the momentum of the ascending column would then become double the momentum of the descent. The principle is understood, and applied in the construction of chimneys, which are contracted as they ascend, and the summit crowned with a taper termination, to deliver the light air. In fact, when the cooling influence, by radiation from the mouth of a vast upcast shaft, is added to the above deductions, the total current maintained by such an arrangement would amount to a mere fraction of what was actually due to the elements employed.

An instance in point is presented by Mr. Phillips's report. It is there stated that, in consequence of the deterioration of the iron tubbing in the upcast shaft at Haswell Colliery, by the constant action of the heated air, the interior was protected by a brick lining. Mr. Phillips says—"A singular result has followed this change. The shaft is contracted, and might, on that account, have been thought likely to deliver less air, but, in fact, it delivers much more—a circumstance, in some degree (perhaps principally, as my informant, Mr. John Taylor, thinks) due to the higher temperature it now acquires by the same furnace action." Mr. Taylor (who, in papers appended to this report, evinces the highest intelligence and ability) is undoubtedly right in attributing great importance to this economy of the heat, by acting on a smaller absorbent circumference. I gave a prominent place to this cause when defending the efficacy of small upcast channels against the condemnation of Messrs. Dunn and Richardson; and when this effect is added to the other influences I have explained, it will be fully seen how futile and pernicious must be the result of their expansion; yet, as far as I recollect, Mr. Sutcliffe and Mr. Deakin are the only correspondents in your columns who have decidedly reprobated the change. In fact, it remains yet a matter for experiment what is the minimum contraction, which will give the greatest velocity without materially increasing friction. The highest temperature in Mr. Phillips's data is 140°, giving an expansion of about one-sixth above air entering at 60°. This moderate heat requires to be protected and economised by every means. The principle might be tested in an upcast of moderate diameter, devoted solely to the discharge of air (and the strict application of the upcast to this use alone would be the greatest single improvement that could be effected), by finishing the orifice in that conical form which is known to give the greatest efflux to fluids under pressure. If the diameter is 10 ft., raise the truncated cone one-third more in height than the measure of the base, or to about 15 ft., contracting the apex to that diameter which shall be found to give the greatest velocity of efflux without throttling the passage of the current. Even when the expansion is not more than one-sixth, it is probable a diameter of from 6 to 7 ft. might be found adequate to deliver all the air which can be made to descend a downcast of 100 ft. area. Such a vaulted form would tend to maintain an equal rarefaction through the whole upcast column, thus economising power; and the motion being principally through the centre, a comparatively quiescent non-conducting medium of air would rest against the circumference of the shaft; whilst the concentrated cone, rapidly delivered, would warm the atmosphere to some elevation, and do the utmost in overcoming that obstacle. Of course, the adequate necessary enlargement of *horizontal channels* to diminish velocity and friction is quite a distinct question.

The details given by Mr. Phillips of the use of the steam jet, certainly imply that it is not likely to become an economical substitute for the power of the furnace. Where the steam is in course of generation for other purposes, it can evidently be made an auxiliary, but it does not appear that it would answer to erect and maintain apparatus purposely for its application; in fact, what can possibly exceed, in economical effect, the passage of 18,000 cubic feet of air per minute, for 24 hours, upon the combustion of a single ton of coal? I wish Mr. Phillips had added the respective depths of the collieries upon which he has taken this average; the addition would have made the information very complete. The *utmost* power which the steam jet is capable of exercising is plainly known, and it will derive *no assistance* from the depth of the workings. The deductions to give its *actual* power must be estimated by conjecture. The highest effect will be represented by considering the jets of steam in the light of a solid piston the diameter of the channel into which the steam is discharged, acting against the atmosphere with the pressure which the steam retains when expanded in that channel. Thus, one jet of 1 in., or sixteen jets of 1-16th in., discharged at a pressure of 144 lbs. into a channel of 1 ft. in diameter, would remove the column of atmosphere before them with the force of 1 lb. per inch, tending to establish a vacuum behind, into which the air will rush with an equal force of 1 lb. As the average effect of steam, when applied to machinery, is one-third of the power actually due to it, the steam jet might thus, *without any deduction being made*, be considered as capable of moving three times the quantity of air that could be moved by the application of the same steam to ventilating machinery; but a great many deductions must be taken from this maximum amount. The volume of air moved being equal to the volume of steam, and having to pass through the same discharging orifice, cannot be the same as would be effected by a true piston with a clear discharging orifice. The air which combines and passes with the steam must either be in diminished quantity, or exist at a higher density than the atmosphere against which the united column has to be discharged, and thus proportionally detract from the force of the steam; also, the current of air being of a much lower temperature, must act immediately it comes in contact with the steam in reducing its expansive force; and this effect will be the greater, if the air is not previously passed over the furnace. When the jet is applied at the bottom of the upcast, this diminution will be, in some measure, counteracted by the increased heat which such condensation imparts to the air. But it is evident *this heat could be applied to the air more economically at first hand.* These suggestions appear to be supported by Mr. Phillips's data. The application of jets of steam at the conical orifice of such an upcast as I have described would evidently tend to remove the superincumbent obstacle of atmosphere, and facilitate the current; but whether the advantage would be worth the cost of an independent apparatus for the sole purpose remains quite a question. I should much like to see an experiment tried as to the *exhaustive* power of the jet. I would place covers over both the shafts, their edges immersed in water, of sufficient depth to support an atmospheric column of several pounds per inch; the steam jets to be applied in a pipe inserted in the cover of the upcast shaft. If the pipe were 1 ft. in diameter, jets amounting to 3 in. of steam, at 144 lbs. per inch, would tend to establish a vacuum of 3 lbs. per inch throughout the workings of the colliery. What actually was established would appear at the water pillar of the downcast shaft. Conditions, of course, would arise which do not exist in the ordinary course of ventilation; there would be a passage of air into the mine through fissures of the strata, and round the sides of the shafts, tending to vitiate the due amount of vacuum, and a rush of water from springs accessible to the atmospheric pressure; still the experiment might have interesting results. By a sufficient expenditure of steam, a force equal to the whole atmospheric pressure of 14 lbs. per inch might be exerted; and it is possible such an occasional use of the steam jet might not only exhaust much gas from the wastes, but promote the discharge of those far more dangerous reservoirs hoarded up in the whole coal.

I have not heard the decision of Prof. Hann regarding the furnace paradox, but believing Mr. Gurney is deceived on this point, I wish to denote what is, I think, the fallacy which has influenced his opinion. Were the communication between the upcast shaft and the workings *cut off*, and the upcast then heated to a certain temperature, it is quite certain that, on opening the communication, a rush of cold air would take place, which would have the effect of diminishing the temperature, and, consequently, the velocity of the ascending column, for a time, to a pitch below what was actually due to the heating power of the furnace. But the fallacy lies in assuming any such intermittent action; the power of the furnace is constant; no more air will pass over it in any second of time but what has had its equivalent already heated. If the heat of the furnace falls, the quantity of air passing will fall; and, on the reverse, a rise of one will cause a certain rise of the other, by a perfectly simple and uniform effect, which does not appear to allow the existence of any such paradox, or diminishing agency, as has been assumed. D. Mushet.

July 24.

VENTILATION BY STEAM JETS.

Sir,—In the use of steam jets for ventilation, I am surprised at not having heard of the steam being led down from the pit head for 3 or 4 fms., and discharged there, in jets either up or down, in place of being sent up from the bottom of the pit, where it cannot be raised so conveniently. In an upcast shaft I think there can be little doubt it would be as efficient 3 or 4 fms. from the top as at the bottom of the pit. I see no reason why it should not act in a downcast shaft also. A steam pipe, leading down at the back of the guide rods, to a horizontal one of larger bore, with jet holes on the upper side of it, would be as simply adapted at the top as at the bottom of the pit. In this country, where little ventilation is required, except the clearing away of carbonic acid gas, the exhaust steam from the high-pressure engines might be advantageously applied to that purpose. That description of engine is almost universally used here for winding, and the waste steam is generally sent up the chimney. It would be as easy to apply it as I mention; and although, in order to prevent retarding the engine, the jet holes would require to be large, and the steam considerably reduced in pressure at its egress, it could not but communicate considerable momentum to the surrounding air. Perhaps some of your practical correspondents, acquainted with this mode of ventilation, may communicate some suggestion upon this important subject.

Scotland, Aug. 6. G. P. C.

PEAT CHARCOAL.

Sir,—Gleaning over the *Standard's* report of the meeting of the Irish Amelioration Society, held on Saturday last, at the residence of W. Pinney, Esq., M.P. for East Somersetshire, where a large assemblage of Members of Parliament, military and scientific gentlemen were present. Our attention was arrested by some observations that fell from Mr. Clark, a practical and consulting chemist, but more particularly from Mr. Wakley, both of whom addressed the meeting at the conclusion of the lecture given by Mr. Rogers, when Mr. Wakley, in drawing the society's attention to the very superior qualities of the Irish peat charcoal, made a gratuitously unqualified assertion, "that it possessed properties not to be found in the peat of England and Scotland;" and was further prominently particular in cautioning the public not hastily to embark in speculations of this nature, by joining other companies, at the risk of thwarting the object of the Irish Amelioration Society.

We have no right to presume, nor do we, that Mr. Wakley, a votary of the art of panegyric as he seems to be, in his zeal for the Irish peasantry, or for the society, whichever it may be, has been employed to puff off the society at the expense of other parties equally engaged with themselves in the wide field of adventure, open to and large enough for all.

We are only much at a loss to know from whence the learned gentleman culled his information, and what chemical proofs he can bring forward to satisfy the public of the verity and correctness of his assumption. No one will deny the vast extent of bog lands in Ireland, so widely distributed over the face of the country, or the desirableness of draining and cultivating the waste lands, and thereby giving employment to its starving peasantry. We agree with Sir Robert Kane, in saying "there is nothing in the industrial economy of the country which requires more alteration than the collection and preparation of turf, and that for practical purposes this valuable fuel is absolutely spoiled as it is now prepared;" but, with all this neglected vast accumulation of stagnant moss, is the Irish peat intrinsically one bit better than the despised bogs of other countries? Both in England and Scotland there are also large tracts of peat land equally lying waste, and capable of being turned to profitable account, and, no doubt, with an industrial and enterprising people (which the Irish can hardly be accused of being) like the Scotch and English, it would, long ere this, have been converted not only to uses of domestic economy, but largely to the appliances of the arts and manufactures, had chemical science unveiled and pointed out before methods of applying it to good and productive purposes.

There can be no question as to the importance of raising new sources of industry in all the sister kingdoms, and, in fact, in every part of the world; but we cannot understand why Ireland alone is to be the favoured one, to the prejudice of our own country, which has an equal, if not a prior, claim to the support and consideration of the British community. In our modest views and estimation of the vast natural importance of these so-considered wild speculations of England, it is evident that the public will not easily be induced to jeopardise their capital in wilder Irish bog schemes and adventures, until they have first been practically made satisfied, and can form a fair judgment for themselves, that it is something more than a mere chimera in their own country to metamorphise the neglected and apparently worthless mass into valuable manufactures; and not till then need Ireland expect to derive the required aid of British capital and enterprise.

We confess we are not surprised at the total ignorance Mr. Wakley has displayed upon the subject; and we are sorry that such a statement should have been permitted to go forth to the world, as it can hardly tend to advance Irish improvement, while it throws discredit on the society itself, as well as on other sober undertakings of a like nature. We, who are a private firm, do not wish rudely to question Mr. Wakley's motive for so wantonly disparaging similar enterprises of an English character. We only, in conclusion, challenge him to a fair and open comparison of the peat, peat charcoal, and the various products therefrom of the two countries, to determine to which the preference belongs, or whether there is any well-defined difference between them to have warranted the condemnatory distinction so vauntingly made and promulgated. You, Mr. Editor, have seen the result, and we leave the matter open to fair and impartial criticism. The Dartmoor Peat Charcoal Company.

Office, Birchin-lane, Aug. 8.

REPTILES NOT "BREATHING" ANIMALS.

Sir,—The experiment on the above subject, to a detail of which you gave place in the *Mining Journal* of the 15th June last, was made in order to determine whether the reptile tribe possessed properties that would admit of their existence in an atmosphere of carbonic acid, or of one containing a great portion of that gas; and the fact that a toad will live upwards of half-an-hour in an atmosphere of carbonic acid, affords unquestionable proof that the function of "breathing" in reptiles is widely different to that of warm-blooded animals.

In my papers of 1847 I have shown, I think incontestibly, that presuming existing principles in Nature to have been in operation at the creation of the world, or about the period of the coal-bed formation, there must have been *at least* three distinct atmospheres—the carbonic, the oxygen, and the air; and as the reptiles, the first of the animal creation, came into existence at no distant period after the carbonic, it is clear that their breathing organs must have been suited to an atmosphere highly charged with carbonic acid, but what peculiar properties these creatures possess, in reference to that gas, have yet to be determined; it is clear that with them it is not so destructive as with the warm-blooded animals, since, if it were, vitality would not be maintained half-an-hour in it, much less allow of a small animal to dispose of a large atmosphere of that deleterious compound.

So close is the connection between the lower grade of animals and the vegetable kingdom, that in their outward characters the naturalist is at a loss to determine where, in some cases, the transition takes place; and I think there will be no difficulty in showing that, in the "breathing," the lower grades of the animal kingdom form a connecting link between the higher or warm-blooded animals, that consume the atmosphere, and the plants that *generate* it. The investigation of such a question, however, necessarily involves the construction of an entirely new description of apparatus: to embark in it at the present period of the year would, therefore, be futile, but I hope by next spring to be enabled to make the preliminary arrangements; for the present I beg to submit, for the consideration of your intelligent readers, a few remarks on such experiments as my other engagements have admitted of my making. On Monday, the 22d of July last, I was obligingly favoured by Mr. Eady, the principal of Wick Hall Collegiate School, Hackney, with a supply of four frogs and six toads; that gentleman having observed, whilst packing up in brown paper the small box that contained them, that if they were breathing animals they would be dead before I reached home; and on the following evening I consigned them each to a wide mouth six-ounce bottle, which I tightly corked. At the expiration of 48 hours' confinement, two of the toads appeared to be in pain and much swollen, which I attributed to my having unwisely placed the bottles for safety in rather a warm position. I, therefore, gave them a cold water bath, which produced a copious discharge; after which they rallied, and, with the others, were put under a tree, where they were protected from the influence of the sun; but, as well as a frog, they expired after 48 hours more of confinement, the others being, to all outward appearance, in perfect health.

It occurred to me, however, that these animals were not only insulated from the air of the atmosphere, but also from its electrical condition, both the glass and the cork being bad conductors of electricity; besides which they were subject to the influence of their filth in the bottle, and of that of the expansion and contraction of the air in the bottle on change of temperature. To overcome these objections, I placed five of the animals under glass shades, such as watchmakers use to cover their work with, the vessels standing in flower-pot saucers, into which I put some water, in the confidence that if the oxygen of the air were converted by respiration into carbonic acid, a displacement equal to one-fifth of the volume would take place within, and the animal being in the remaining nitrogen would shortly expire. Any such action I could not detect—a mere film of water throughout the week of their confinement having covered the bottom of the dishes, but at the expiration of that period they rapidly died in succession. Under the shades I placed small pieces of marble as perches, and when on these the heads of some of the largest reached nearly to the top of the glass where respiration could certainly not have been maintained, especially by a large toad, which was constantly on it, probably to keep out of the wet; the frogs during the day gave preference to the bottom of the dish, but at night resorted to the stone.

We have, then, evidence that these reptiles lived, some five, some six, and others seven days (after having been previously confined in small bottles) in an atmosphere that would not more than suffice to maintain the life of a mouse so many minutes; but if evidence were wanting that reptiles do not breathe, it is afforded by the fish. If two or three fish be placed in a large globe of water, they will constantly keep under water. Now, water is a compound of two volumes of hydrogen to one of oxygen, and air consists of four volumes of nitrogen to one of oxygen; it is evident, therefore, that whether the fish consume the oxygen of water or of air by respiration, a considerable volume of gas should be evolved of either hydrogen or nitrogen; but if the gills and mouth be closely watched, not a particle can be detected—a difficulty not easily to be overcome; if, however, a great number of fish be put in a glass globe, the animals will then come to the surface for that of which they have exhausted the water, probably its electrical condition, which I suspect, in reptiles, is as essential to keep *down* the temperature of their system, as it is necessary, by chemical action, to *maintain* that of the warm-blooded animals.

Franklin Coxworthy,
Canterbury-Place, Lambeth-road, Aug. 6. Author of *Electrical Condition.*

APPROACH OF PATENT REFORM.

Sir,—Upon carefully perusing the new Designs' Act, as it is entitled—a brief abstract of which you gave in last week's Journal—by which provisional registration of inventions can be effected previous to patenting them, I find that the Legislature have by no means improved upon the system proposed in my petitions to the House of Commons, formerly given in the *Mining Journal*, as the plan there set forth would have placed every inventor, immediately upon applying for a patent, and paying a small sum, in full possession of his property therein, without doubt or question—the right being simply liable to expire, or forfeiture, at a certain date, if the whole of the patent dues were not paid up. Now, the new Act will do nothing of the sort. It will simply give the provisional registree the power, as regards the invention, or design, provisionally registered, to exhibit it in the *way prescribed by the Act*, and secure him against such exhibition, and the publication of any descriptive account thereof, *when thus exhibited or submitted for exhibition*, acting as a publication, so as to annul his future patent; but should he sell or expose for sale any article made, according to his invention, he is to forfeit the benefits of the Act. Thus, if we examine the provisions of this Act, in connection with the patent law, it will appear very doubtful whether an inventor's title to a patent will not be defeated, should any person exhibit his design in any other way than that prescribed by the Act, or publish such a descriptive account of the invention as shall not fall within the terms of the Act, or by selling or exposing for sale any articles made according to the invention; for, according to the terms of the patent law, no publication, use, or sale, previous to the date of the patent, is allowed to take place, without prejudice to the subsequent patent; therefore, any publication or use to be harmless and unprejudicial, must be such as is clearly permitted by the Act; and as the Act, whilst it makes the sale of any article by the registree to bar his title to a future patent, as far as it is barred by the law, is silent as to the effect of a sale, or exposure for sale, by another party, to allow which does not seem very reasonable, as then any other party might sell, and expose for sale, the provisionally registered articles for the profit of the provisional registree, it seems that provisional registration will not prevent such sale, or exposure for sale, should it take place, operating to the prejudice of any future letters patent. These arguments appear to be equally applicable to subsequent complete registration. It is a comfort, however, that under the bill for "simplifying the forms of appointments to certain offices, and passing grants under the Great Seal," the Lord Chancellor can make regulations which may, in a great measure, remedy the above defects, as it only requires that he should date any patent back to such a day as the equity of the case may demand; but, after all, the system will be an ill-contrived one. Should the Act stand as it does now, the provisional registree may proceed against any party injuring his property as above for damages, although it may be doubtful if this be a full remedy.—F. W. Campin: *Patent Office, Strand, Aug. 8.*

BALLOON RAILWAY—NORTH COAST OF AFRICA.

PROPOSITION FOR THE AVOIDANCE OF RIVERS, AND THE CONSEQUENT FATAL EFFECTS OF MALARIA.

Sir,—As the establishment of a settlement in the interior of Africa has long been an object of great interest to the commercial establishments of Liverpool, and in the endeavour to carry it out much money has been expended, and many lives lost, with very little progress towards success, I should feel obliged by being allowed permission to address, through your Journal, the following remarks to the merchants and bankers of Liverpool. Permit me, gentlemen, to point out a means of carrying out the object in view, one on which I have much reliance. I allude to the balloon railway, a description of which has appeared in the columns of the *Mining Journal* and other scientific publications. I consider it the most simple, cheap, and safe of all railway travelling, and its practicability can be easily tested. Its greatest enemy is a dead calm; like a ship, it requires to start with a fair wind; it has one-half the points of the compass in its favour, and with a wind completely aback would travel at about the rate of fifty miles an hour, setting storms and hurricanes at defiance. My proposition is for a society with plenty of means to establish a terminus on the coast of Africa, near and convenient to Morocco, with a view of laying down, (say) 1000 miles of single rails into the desert. This at first sight may appear a monstrous undertaking, but on a full consideration of the subject, and an examination of my models, I think you would be satisfied of the practicability of the plan. To satisfy you on that point, I am willing, free of all charge, to go down to Liverpool, and exhibit the models for a week to the public. With regard to the expense, the outlay will not be so great as at first might be supposed; not requiring ballast, they could be constructed of much less expensive material than balloons are at present made of, and would contain 15 persons in each. The immense tracts of dry sand in Africa are favourable to the laying down of the one line of rail required, it merely being necessary to lay the planks on the earth, fasten them by cross planks, on which the rail is laid, and the specific gravity of the whole is sufficient to keep the balloon steady in its course, one plank being laid down forms a road for the next. These planks might be drawn to their places by blacks. The carriage, or holder, to which the balloon is attached has eight wheels, four working upwards against the under side of the rails, the other four being friction wheels, and glides along as the balloon is propelled by the velocity of the wind. In crossing these deserts, where the heat is so overwhelming on the sand, the passengers would feel themselves in a totally different atmosphere, at a height of 40 ft., far from disagreeable. In carrying out this project, it would be necessary to start from a woody part of the coast, and erect saw-mills. The iron rail is a very light one, the pressure being upwards instead of downwards, as at present, and might be constructed in England at little expense. I here propose to carry out a great moral and national undertaking; and although I may not be able, from want of influence in the proper quarters, to induce persons to join in its development, sooner or later it will be accomplished. The plan is practicable, and the object too great to be allowed to die away. I have put in the wedge—it is for others to perfect the operation. Conceive the magnificent spectacle of an English town rising on the shores of the Atlantic in communication with another town in the interior, with the possibility of crossing the immense desert of Zahara 1000 miles into the interior over the burning sand, and communicating, by electric telegraph, in as many seconds. What sources of wealth lie open to the merchant, builder, and speculator—what moral influence the Christian may have in directing the mind of the untaught savage, when the energetic Saxon is master and reclaimer of the wilds of Africa. The balloon railway, like all other scientific innovations, must be expected to meet with opposition, but being devoid of complicated machinery, it will more readily bear demonstration, and carry conviction to the mind. Should these remarks give those gentlemen to whom this letter is addressed a desire to know more on the subject, I am prepared to exhibit my model in Liverpool, as I have said before, free of all charge. When this railroad is accomplished, it will then be a consideration if it should not be carried further on the other side of the Niger, to Gago, from whence they carry gold to Morocco, an additional distance of about 300 miles. J. Browne.

Great Portland-street, Marylebone, August 8.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending August 3 was—No. of passengers, 15,703.—Amount of money, £65 8s. 7d.

COMPANIES PROCEEDING UNDER THE WINDING-UP ACT.

GERMAN MINING COMPANY.—A meeting was held before Master Tinney on Saturday, when it was resolved to take the necessary steps for effecting a sale of the mines belonging to the company, consisting of copper and quicksilver, in the kingdoms of Bavaria, Prussia, and Duchy of Nassau. Owing to the recent disturbed state of the continent, a sale of the property could not be carried out with advantage. In order to retain legal possession, the mines are continued in working at a cost of 250*l.* per month, and the liabilities are estimated by Mr. Norris, the official manager, at about 17,000*l.*, against which the value of the property to be realised will come in as assets under the Act. The expenditure incurred in working the mines exceeded, it appeared, the moneys raised by issue of shares by 19,400*l.*, of which 7139*l.* was advanced by the directors. A claim of the London and Westminster Bank for 12,360*l.*, objected to on the ground that the directors had no power to borrow money under the deed, has been allowed by the Master as *prima facie* proved.

KILBRICKEN MINING COMPANY.—On Monday, a meeting of shareholders was held at the offices of Mr. Wryghte (the official manager), to consider what steps should be taken with reference to the sale of the mine and its materials, situated in Ireland, by Mr. Henry Crockford, who claims to be its owner. After considerable discussion, a resolution put by Mr. Wyld, M.P., was carried, to the effect that immediate proceedings should be taken on behalf of the estate to resist the sale of the mine, and to enforce payment of the calls.

THE NORTHERN COAL MINING COMPANY.—The Master of the Rolls gave judgment in the case of the executors of W. Rix Blakeley, deceased, which was an appeal from the decision of the Master, who had placed them on the list of contributories. The executors contended they were not liable for the shares, that deceased was only liable during his lifetime. The Master of the Rolls, however, decided that the executors would have been entitled to any profit on them, as they were part of deceased's assets, and they must bear any loss, as his liability continued until the shares were regularly transferred. Application refused with costs.

SEA, FIRE, AND LIFE ASSURANCE.—Master Tinney has appointed Mr. Ernest, of Cheapside, the official manager of this company.

LONDON AND WESTMINSTER MUTUAL LIFE ASSURANCE.—Master Senior finally settled on Wednesday the list of contributories in this company, amongst whom, as estimated by the official manager, there will, instead of a call being made, be a surplus to divide of about 4000*l.* The business of the undertaking, on being discontinued, was transferred to the Britannia Assurance Company, who executed the usual release.

ROYAL INDIA AND AUSTRALIA STEAM NAVIGATION.—On Thursday, a meeting of creditors was held before Master Blunt, for the further proof of claims on this estate, which amount in all to between 3000*l.* and 4000*l.*, the only assets against which, under a distringas, amount to less than 400*l.*

PARCEL POST COMPANY.—Master Senior has appointed an official manager to investigate and wind up this undertaking, which was started for the transmission and delivery of parcels in and out of London, at the offices formerly held by the Anti-Corn Law League, in Fleet-street. The proposed capital, as stated by the petitioner, Mr. H. Hawker, of North Audley-street, was 30,000*l.*, in 6000 shares, of 5*l.* each. A sum of 7s. per share was paid on shares allotted into Rogers's, but sufficient was not found to carry on the undertaking, which discontinued business without assets, and debts of 4000*l.* in respect of contracts for carts, horses, and harness, and the other paraphernalia of parcel carrying.

NATIONAL DISINFECTED MANURE COMPANY.—The Master has made a call of 6s. per share, to pay off the 2000*l.* or 3000*l.* liabilities.

DIRECT WEST END AND CROYDON RAILWAY.—On Saturday, Master Tinney held a meeting to consider the making a call of 50*l.* each upon 11 of the managing committee of this company; but, after some discussion, it was postponed until after the vacation.

SHREWSBURY AND LEICESTER.—On Saturday, Master Senior settled the list of provisional committee to this company, in number 103, all of whom, upon a new principle of practice, he retained on the list as liable for such portion of the expenses incurred which it could be proved they had authorised. Such of these gentlemen who contributed 63*l.* each to pay off expenses will have credit given them to that extent in any call that will be made to pay off liabilities, estimated by Mr. Begbie, the official manager, at over 5000*l.* In proceeding with the list of 500 allottees of shares, of which some 25,000 were issued, the Master was of opinion that he should not retain on the list as liable those parties who simply received allotments of shares and who did not pay the deposit; but looking at the unsettled state of the law upon the subject, he advised the official manager to take the opinion of the Court.

THE DENDRE VALLEY.—Petitions have been presented for the winding-up of the affairs of this undertaking, for the construction of which along the Valley of the Dendre, from Athe to Termonde, a concession was granted by the Belgian Government, and the liability of the shareholders limited according to the law of Belgium. According to the terms of the concession, 45,000 shares were to be allotted in England, and the directors allege they allotted them all. The number on which the deposits, 61,540*l.*, was paid in England amounted to 30,770*l.*, and in Belgium 9800*l.* on 9900 shares. A sum of 79,260*l.* was lodged by the directors with the Belgian Government as caution money, an equitable adjustment and division of which sum among the shareholders is now the chief thing sought for. On the call of 2*l.* per share, 19,860*l.* was paid in England, and only 600*l.* in Belgium. Surveys were made for the line, but it was not proceeded with, the directors alleging that the paid-up capital was insufficient. The balance-sheets show that the directors received 91,800*l.*, of which 81,400*l.* was paid into the London bankers, and 10,400*l.* into the Belgian Bank. The expenditure was 15,484*l.*, and the petitioners allege that, in 1847, there was a balance in favour of the company of 92,489*l.*, including the 79,260*l.* caution money in Belgian stock, and the 10,000*l.* in the Belgian Bank, of which, on behalf of the shareholders, they now call for an account from the directors.

WOLVERHAMPTON, CHESTER, AND BIRKENHEAD JUNCTION.—This was an appeal case to the House of Lords, from an order of the Lords Commissioners of the Great Seal; Lord Brougham sat as speaker, Mr. Norris (official manager) was plaintiff, and Mr. Cottle, provisional committeeman, defendant. It appeared that Cottle admitted he allowed his name to be put on the list of the provisional committee, but he did not apply for or accept shares, attended no meeting, and did no act. That 25 shares were sent him, but he never took them, or any share. Under these circumstances, Master Brougham excluded him from the list, which decision had been confirmed by the Lords Commissioners, and from which the official manager now appealed. Mr. Bethell and Mr. Glasse for the appellant, contended that Cottle, although he might not be liable to debts and liabilities in general, certainly was to the liabilities contracted while he was a committeeman, which exceeded 12,000*l.*, and Mr. Rolt insisted that the judgment of the Commissioners was right. Lord Brougham, after some remarks on the absence of the judges from that house, and that as they were parties to the decisions arrived at, it was right the Lords should decide the case by themselves, recommended a postponement of judgment until the next appeal was heard, which involved the same question.—On Friday his lordship delivered judgment, affirming the decision of the Master, and the commissioners, and the appeal was dismissed with costs. In the other case, Hatton *v.* Upfill, the circumstances were different, as the plaintiff was the appellant; he had accepted his shares, and his lordship decided his name ought to be on the list of contributories, and dismissed the appeal with costs.

GREAT NORTH OF ENGLAND AND GLASGOW UNION.—The Master has appointed Mr. Harding to wind up and investigate this company's affairs.

GALWAY AND ENNIS GRAND JUNCTION.—On Monday, the question of the liability of the solicitors of the company, Sir J. Barrington and Co., to be placed on the list of contributories in respect of 300 shares, came on before Master Blunt. The evidence of the secretary went to show that, as the shares at the period were at a premium of 10s., he suggested to these gentlemen that they should take 300 shares, to which one of them replied, "we will;" but the shares were not subsequently allotted to them, neither did they sign the subscribers' agreement. His Honour held that the evidence of contract was insufficient, and released the parties from the list of the contributories, which is now settled, and a call is to be made to discharge the liabilities, estimated by the solicitor to the estate, Mr. C. Smith, at about 5000*l.* This is expected to be liquidated in part by making those shareholders pay up the deposit in full who did not regularly pay it.

MIDLAND UNION AND LEICESTER.—Petitions praying for the winding-up of this company have been presented by Messrs. C. H. Bracebridge, of the Hall, Atherstone, and T. Macaulay, of Leicester, two of the directors, who state that there are liabilities in connection with it still outstanding, and to be liquidated, to the extent of 8000*l.*; that out of the 60,000 shares 56,635 were allotted—of which the directors took 12,600; but the undertaking failed, and the expenses incurred could not be fully paid off, owing to the non-payment of the deposit. The shareholders were applied to to pay 2s. a share towards the expenses, but did not generally respond, and some of the directors contributed 100*l.* each, to discharge debts and stave off actions; for which they now seek reimbursement.

SOUTHERN COUNTIES UNION.—Yesterday, Master Kindersley proceeded with the winding up of this company, in pursuance of an order from the Lords Commissioners, upon the petition of Mr. W. Shadbolt, chairman of the Greenwich Railway, who states, that at the date of the company's last account the debts claimed to be due from it amounted to 14,000*l.* He states, that he and other members of the compnay have been sued, and judgment obtained against them for two separate sums of 2500*l.* and 1066*l.*, claimed by creditors, and that it is only fair they should be recouped by the other members rateably according to the shares they took. There were 220 members of the provisional committee, a large number of whom signed engagements to take. The following gentlemen are proposed to fill the office of official manager to wind up the estate—Messrs. Adron, Sandeman, Hutton, Wryghte, Norris, and Harding.

WESLEYAN NEWSPAPER ASSOCIATION.—On Thursday, at a meeting before Master Kindersley, a dividend of 10s. in 1*l.* was declared payable to all those creditors whose claims, to the extent of between 2000*l.* and 3000*l.*, had been allowed by Mr. Goodchap, the official manager. The dividend accrues out of the amount of two calls of 4*l.* per share paid by the contributories, and out of the debts of the estate that have been collected. There are other claims of creditors to be settled, which, with the expense consequent on the process of winding up, will, it is expected, render another call of 4*l.* per share necessary, making a total of 12*l.* per share payable by the shareholders who embarked in the undertaking.

LIABILITY OF CONTRIBUTORIES UNDER THE WINDING-UP ACT AND THE INSOLVENT COURT.—The important question of the liability of contributories for calls under the Joint-Stock Companies' Winding-up Act, petitioning for their discharge under the Insolvent Debtors' Act, came on last week before Mr. Serjeant Dowling, in the County Court of Yorkshire. Five insolvents, named Parchon, Bullock, Kerr, Midgley, and Wild, came up to be heard on their petition for discharge. The opposition was instituted by Mr. Goodchap, the official manager, at the direction of Master Kindersley, who had placed the five petitioners on the list of contributories as promoters of an undertakiug called the Wesleyan Newspaper Association, the liabilities in connection with which amount to some 7000*l.* A further call of 4*l.* per share had been made, and for non-payment the insolvents were committed to York-castle for contempt of court. It was contended by counsel for the official manager that, by the 88th section of the Joint-Stock Companies' Winding-up Act, the insolvents could not be discharged, that section being a portion of an Act passed subsequently to the general Insolvent Debtors' Act, and consequently superseded the latter; in reply to which, on the part of the petitioners, it was argued that there was nothing in the 88th section of the Winding-up Act to control the working or militate against the 55th section of the Insolvent Debtors' Act. His Honour acquiesced in this latter view, and the insolvents were discharged. Application is to be made to the Lords Commissioners to consider Mr. Serj. Dowling's decision: it will be based upon the ground that a person committed by the Court of Chancery can only be acquitted by that court, and that the provisions of the Insolvent Debtors' Act cannot override those of the Act for winding-up, or the jurisdiction of the Court of Chancery.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY ... Eastern Archipelago Company—offices, at Twelve.
MONDAY..... Worthing Mining Company—offices, at Two.
TUESDAY..... Droitwich Patent Salt Company—King's Head Tavern, at Two.
WEDNESDAY .. Copiapo Mining Company—offices, at One.
Pembrokeshire Iron and Coal Company—offices, at One.
Alfred Home and Foreign Life Assurance Company—offices, at Two.
THURSDAY .... Hibernian Mining Company—offices, at One.
South-Eastern Railway—London-bridge Hotel, at One.
Great Western Railway—Bristol, at One.
FRIDAY ..... Buckinghamshire Railway—Euston Station, at Two.
Northern and Eastern Railway—offices, at One.
London and North-Western Railway—Euston Station, at Twelve.
Northampton and Banbury Railway—Euston Hotel, at Four.

MINING APPOINTMENTS DURING THE WEEK.

10. Par Consols pay.
12. Wheal Seton account on the mine; Par Consols sampling.
14. United, Par, Caradon, and other mines sampling; Wheal Margaret, on the mine.
15. No copper ore ticketing this week.
16. Budnick pay, Levant tutwork pay.
17. Fowey Consols setting and pay.

ACCIDENTS.

Wheal Uny, near Redruth.—We mentioned last week that Capt. Samuel Coad, late of Constantine, and confidential agent to Mr. C. Fox, of Trebah, was much injured by a fall of roof. We have since received a letter from Mr. Henry Harris, the medical attendant to the mine, in which he informs us that the left thigh bone was dislocated, and the head of the bone thrown back on the ileum, occasioning a shortening of the limb 3 inches. In this state he was taken to Redruth in a cart, and Mr. Harris was sent for, but, unfortunately, he was from home, attending other cases. Capt. Coad's friends and comrades went to another surgeon in Redruth, who absolutely refused to see him, asking *who was to pay him?* the men immediately replied they would, but he even then refused to go. A gentleman galloped his horse in search of Mr. Harris, who returned with him, and after much extension of the limb the dislocation was reduced, the fractured bone set, and the patient is now going on well, while his friends are glad the surgeon applied to did not take the case in hand. We hope there are not many such inhuman practitioners in the county, and we only wish we had been favoured with his name, that we might exhibit him to the world as unworthy of the position he holds in society. We believe there are not many in the locality, where sudden accidents unhappily are so rife, but what would have attended in such circumstances, without thinking of mere pay, and afterwards deliver the case over to the regular attendant of the mine.

Explosion at Seaham Harbour.—A Scotch schooner having taken in a cargo of South Hetton coals, the crew fastened down the hatches, contrary to advice; soon after the mate went to strike a light in the cabin, when a fearful explosion of carburetted hydrogen gas took place, by which himself and the captain were seriously hurt.

Kilmarnock.—John Brown was killed, and James Wilson very severely injured, by a fall of roof at the Home Quarry, on the Ayr Water.

The *Glasgow Mail* says—"Since the resumption of work by the colliers in the various pits round Hurlford, several accidents have occurred, but fortunately none of them of a serious nature, with the exception of one, at the Portland Iron Company: a workman of the name of Tod, who has but recently taken to the occupation of a collier, while putting a hutch of coals on the cage, was drawn up by the engine, which, from some misunderstanding of the usual signal, was put in motion too soon, and Tod was, in consequence, so severely bruised about the head and back, that little hopes are entertained of his recovery."

Perthshire.—A young man was killed in a coal pit at Oakley, by a stone falling on him

Sheffield.—As W. Robinson (in the employ of Messrs. Charlesworth, Rawmarsh) was coming out of the pit, and when about 40 yards from the bottom, he stopped the corf to examine the cistern, which is about half-way down the pit. While doing so he overbalanced the corf, which was thrown from the chair, and both were precipitated to the bottom. The poor fellow, who had gone up in the wrong corf, was killed on the spot.

Ilkeston.—William Rice went to work as usual after the other workmen had finished, and it is supposed that he was attacked by the damp soon after he arrived at the bottom, for the owner of the pit coming to it about a quarter of an hour after he entered, heard a groan, and directly gave the alarm. When assistance arrived, he went down the mine, and found the man expiring. He was immediately drawn out of the pit, but died soon after the doctor arrived.

Grange Colliery.—The verdict at the coroner's inquest, on the bodies of J. Pryor and G. Armour, killed by the explosion of the boiler, was accidental death—the jury expressing an opinion that the explosion was caused by a deficiency of water in the boiler.

Thornley Colliery.—G. Richardson was unfortunately crushed to death against the wall of the pit by the rolley.

Cassop Colliery.—G. Felton was killed here by a fall of roof.

Llanelly.—On Saturday evening last, a man named Fisher, when in a state of intoxication, fell into one of the Camain pits, 40 fms. deep, and half full of water, and was drowned. The body was recovered on Sunday. There are 7 or 8 pits in this locality totally unprotected.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Carr's West Hartley 14—Hastings Hartley 14—Holywell 14—Ravensworth West Hartley 14—West Hartley 14—Wylam 13 6—Eden Main 14 9—Lambton Primrose 14 9—Wall's End Belmont 14 9—Braddyll 15 9—Hetton 16—Haswell 16—Lambton 15 6—Richmund 14 6—Scarborough 14 3—Whitwell 14—Heugh Hall 14 3—Hartlepool 16—Kelloe 15—South Hartlepool 14 9—Thornley 14 9—West Kelloe 14—Adelaide Tees 15—Cowndon Tees 14—Maclean Tees 13 3—Richardson Tees 13 3—Seymour Tees 14—South Durham 14—Tees 15 9—Cowpen Hartley 14—Hartley 13 9—Nixon's Merthyr and Cardiff 21 6—Sidney's Hartley 14 6.—Ships at market, 66; sold, 52.

WEDNESDAY.—Buddle's West Hartley 14—Hastings Hartley 14—North Percy Hartley 13 6—Ravensworth West Hartley 14—South Peareth 12—Tanfield Moor Bute's 12 6—Wylam 13 6—Wall's-End Bewicke and Co. 14—Gosforth 13 9—Hotspur 13 3—Lawson 13 6—Riddell 13 6—Walker 13 6—Braddyll 15 6—Hetton 15 9—Lambton 15 6—North Hetton Lyons 14 3—Richmund 15—Stewart's 16—Caradoc 14 6—Heugh Hall 14 3—Hartlepool 15 9—Kelloe 15—South Kelloe 14 3—Adelaide Tees 15—Maclean Tees 13 6—South Durham 14—Tees 15 9—West Cornforth 13 6—Derwentwater Hartley 14—Hartley 13 6.—Ships at market, 96; sold, 63.

FRIDAY.—Buddle's West Hartley 14—Chester Main 13 3—Hastings Hartley 14—North Percy Hartley 13 6—South Peareth 12—Tanfield Moor 12 6—Wall's-End Bewicke and Co. 14—Gosforth 13 9—Harton 13 9—Hotspur 13 3—Hilda 13 6—Northumberland 13 3—Riddell 13 6—Eden Main 14—Braddyll 15 3—Hetton 15 6—Haswell 15 9—Kepier Grange 14 6—Lambton 15 3—Richmund 14 9—Russel's Hetton 15 3—Scarborough 14—Stewart's 15 9—Whitwell 13 9—Caradoc 14 3—Heselden 13 9—Howden 14—Heugh Hall 14 3—Kelloe 14 9—South Hartlepool 14 9—South Kelloe 14 3—Whitworth 15—Maclean Tees 13 6—Richardson Tees 13 3—Tees 15 9—Whitworth Coke 21.—Ships, 125.

Delivery of coals, &c., in the port of London, during the month of July:—

	Ships.	Coals.
Newcastle	380	116,608
Sunderland	361	95,333
Stockton, Middlesbrough, &c.	261	68,488
Blyth	47	11,283
Scotch	4	417
Welch	46	8,201
Yorkshire, &c.	30	2,317
Small coal	2	205
Culm	1	320
Cinders	6	367
Total imported in July, 1850	1138	303,539
Imported in July, 1849	—	229,491
Increase	—	74,048

Inland coals brought by canal, in the month of June, 1850, upon which the City's and other dues were received ..... *Tons* 2621
Inland coals brought by railway, the City's and other dues upon which were paid into the chamber in the month of July, 1850 636

COMPARATIVE STATEMENT OF 1849 AND 1850.

	Ships.	Tons.
Imported from Jan. 1 to July 31, 1850	6967	1,951,325
Imported from Jan. 1 to July 31, 1849	6434	1,779,818
Increase in the present year	533	171,507

THE MINING COMPANY OF WALES—

NOW INCORPORATED WITH THE

RHOSSYD—"PENANT OF FESTINIOG"—SLATE, and DENBIGH GREAT SLAB QUARRIES COMPANY.

CAPITAL £120,000,
In shares of £5 each.—Deposit £2 10s. per share.

PROSPECTUS.

This COMPANY is FORMED for EXTENDING the WORKS on the magnificent VEINS of ROOF SLATE along the celebrated FESTINIOG RANGE; the rich and extensive COPPER, LEAD, and SILVER-LEAD MINES, already productive, and developing along the Cwm Ciprwth, Gilvach, and Blaeny Penant mountain districts, in Carnarvonshire, and the Great Slab Quarries in Denbighshire.

RHOSSYD AND WRYSGAN SLATE QUARRIES.

The slates now being raised from the Rhossyd veins, just cut, have been pronounced by several engineers and slate agents as of a very superior quality, and the veins themselves of the highest and most productive order in sound slate rocks—the tabular structure and purity of metal of which, with their other fine qualities, have obtained for them the name of the "Penant of Festiniog Slate Veins." Indeed, the slates from these veins have been several times tested by the best judges in every possible manner, and finally reported—"undeniably the best quality."

The Rhossyd veins of slate continue through Wrysgan, another estate of vast extent—paying no royalty whatever, and held by lease on a small yearly rent. This lease has been purchased on advantageous terms, and, as it immediately adjoins Rhossyd, can be worked with great facility and economy under the same local management. Some cargoes of superior slates from the Wrysgan Open Quarries are now on the floors, and the works are in a fair state of progress—the monthly produce of which, even at present, shows the advantages that may be expected to attend the interests of the company in connecting the Wrysgan and Rhossyd Estates, and placing both under the same direction.

CWM ORTHIN SILVER-LEAD MINES.

Besides the above slate properties, a very promising silver-lead mine has been opened on a good lode of ore, on the north-eastern verge of one of the mountains on Rhossyd, called Cwm Orthin, which is included in the Rhossyd lease. About 5 fathoms of shallow levels, &c., have been driven, from which some tons of ore are now on bank, that produce 26 ounces of fine silver per ton, and seems to be of the same character as that of the celebrated Daren and Cwm Symlog Mines, in Cardiganshire,

GILVACH AND CWM CIPRWTH COPPER MINES.

The extent of these mines on the lodes is about two miles. Two lodes have been proved in distant places along their bearings. On Cwm Ciprwth there is a water-wheel with pumps, &c., and a shaft with several shallow drivings therefrom. The greatest depth about 18 fathoms, at the bottom of which there is a lode of 8 feet wide, well mixed with copper ore, and carrying a continuous rib of 2 feet, nearly full of solid ore. This lode is very promising—as gossany and kindly as any miner could wish, and likely to improve still further in depth. More powerful machinery must, however, be erected, and a change made in the water-course, to put this mine to work, to make those high returns promised by present indications.

Gilvach is undoubtedly a great mine. It has already produced several hundred tons of ore at shallow workings, and now shows, on small drivings at bottom of winze, or subshafts, a lode of 4 feet wide, quite solid. Some small shipments of ore have been lately made, from trials at these bottoms, and heaps of ore from the same are now on the washing floors. The adit leading to the winze shafts is, however, rather tortuous, as, indeed, are the winzes themselves, and the water is strong at bottom; therefore, it is advisable to open a new adit level, to command the bottoms (see report), which, when done, will render available at once some thousand fathoms of rich ore ground, and some hundred fathoms of a most productive lode,

But, besides all this, there is being worked a deep adit level, some 12 or 13 fathoms still lower down the mountain, that has just cut one of the southern lodes, parallel and within a few fathoms of the former, which shows rich copper ore, and is very promising.

It needs only to be remarked, in confirmation of the favourable opinion reported of these mines, that the same lodes have been worked on for several years, and are now being worked, on the north eastern side of the mountain, in the celebrated mines of Drwsy Coed, &c., distant, in horizontal range, from Gilvach 990 fathoms, and at present producing immense quantities of ore, reported 1000 tons monthly. Indeed, several railway waggons are seen constantly in active service, bearing their rich burdens to the well-arranged premises of the company at Carnarvon for shipping.

BLAEN-Y-PENANT.

One mile east of Gilvach, lead, copper, silver-lead, and sulphur mines, of great note, present themselves, and are now in the possession of the company. They were opened by poor men to an average depth of seven or eight fathoms, and ores raised sufficient to equalise expenses; but want of system, and machinery to command the water, caused the works to be suspended. The indications all through, particularly offering in a district pregnant with metallic riches, are highly favourable, and warrant a recommendation to open and work these mines with due spirit.

THE DENBIGH GREAT SLAB QUARRIES.

These quarries lie within three miles of a safe and commodious shipping harbour, near Conway. They are of immense extent, and quite inexhaustible. The quality of the slabs has been rigorously tested, and found proof in delicate polish, free from chipping in sawing, &c., and every way adapted for general and refined uses. The quarries are now open for immediate returns.

The following calculations on prices, at present rates of contracts, &c., will show the high value of this important addition to the foregoing mines and quarries belonging to the company:—

Contracts are now being made to raise, dress, square, &c., and carry from the quarry to the wharf, slabs of any skantling, at 15s. per ton, all expenses included.

Freight from wharf to Conway, and from thence by railway—say, to London, including dues, &c., 7s. 6d. per ton.

One quarryman and assistant, contracts, as above, for 40 tons of slabs per month.

The prices of these slabs at market are from 2*l.* 10s. to 3*l.* 10s. per ton.

Therefore, 12 contracts in one month will produce 480 tons of slabs in the market—say, in London, at an expense of	£540	0	0
Let the superintendence, incidentals, royalties, &c. be	60	0	0
Making the gross cost to the company of 480 tons of slabs	£600	0	0
Which sell even at lowest price for	1200	0	0
Therefore one month's profit on 12 such contracts, is	£600	0	0
Or yearly profit on like work, or 12 contracts alone	£7200	3	0

And these contracts may be doubled, tribled, or quadrupled, &c., in proportion to the market or sales! (See respective reports.)—In a word, this company presents a source of investment of positive worth, of real standard excellence, that courts the closest examination; neither figurative nor doubtful, nothing uncertain; everything fair and open, and truthful, and such as must insure a high interest to the shareholders.

SUMMARY OF THE CONDITIONS AND RULES PROPOSED TO THE COMPANY FOR THEIR ADOPTION.

1. The affairs of the company to be managed by a chairman and board of directors—three of whom shall form a quorum.
2. Candidates for election as chairman or directors, must each possess at least 50 shares.
3. General meetings of shareholders shall take place every half-year, when all questions of the affairs of the company shall be decided by a majority of votes present; holders of 5 shares to have one vote; of 10, two votes; of 20, three votes; of 50, four votes; of 100, five votes; of 200, six votes; and of every 100 in addition an additional vote.
4. The shares are numbered in order, and made transferable to bearer—therefore, no holder of scrip can be responsible for a greater amount than that due on the shares in his own possession.
5. Should any future call be required, the amount shall not exceed 10s. on each £5 share. Two months' notice must be given for that purpose in the *Mining Journal*, London *Times*, and *Carnarvon and Denbigh Herald*; and in default of payment in three months after the above notice, the numbers not paid up in concordance with that call, shall be forfeited and advertised accordingly.
6. The directors shall meet in the board room, attached to the company's offices, on the first Tuesday of each month at one o'clock, for the general transaction of business.
7. The accounts of the company shall be audited, and produced at the general half-yearly meeting, when dividends shall be declared and appropriated in the usual manner.
8. The board-room shall be open for the directors on every Tuesday, at Eleven o'clock. The secretary may summon a board on any day in case of emergency; and the directors may call a special meeting at any time, by giving one week's notice.

NOTICE.

A general meeting, for the allocation of shares, &c., shall take place on the 23d day of August next, at One o'clock, in the company's offices, 24, Lincoln's Inn-fields, London, when the board of directors and committee of management shall be declared for the ensuing 12 months.

BANKERS.

The National Provincial Bank of England; and the North and South Wales Bank.

SOLICITORS.

Messrs. Richard Thomas and Son, 3, Fen-court, Fenchurch-street, London.

LOCAL SOLICITORS.

Griffith Jones Williams, Esq., Dolgelly; and William Griffith, Esq., Llanwrst.

SECRETARY.

St. Pierre Foley, C.E., &c., (Mining Company of Wales, &c.), No. 24, Lincoln's Inn-fields, London,

To whom application for shares, &c., is to be made.

N.B.—Arrangements are made also to place under the management of the company, against the first day of general meeting, the celebrated and valuable mines of Cwm Symlog, Coninog, &c., situated in the very centre of the ancient British Potosi district of Cardiganshire.—July 18, 1850.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

MASTERS & CO., ORIGINAL INVENTORS and SOLE PATENTEES of the following SCIENTIFIC and USEFUL INVENTIONS, beg to call the attention of the Nobility and Gentry to their latest discovery in the preparation of SODA WATER, &c. &c., by their

PATENT SODA-WATER AND AERATING APPARATUS,

By the aid of which Soda Water, and all aerated waters, can be made and fully charged with carbonic acid gas in a few minutes, and the flattest Beer or Wine can be made as brilliantly sparkling as Champagne in an equally short time, and the expense mere nothing.—Price of machine, 30s. and upwards, which needs only be seen to be appreciated. Adapted for shippers to every climate. Also,

MASTERS' PATENT ICE SAFE,

For preserving Provisions Cool in the hottest weather in summer.

MASTERS' PATENT FREEZING MACHINE,

For making Dessert Ices, Freezing Spring Water, and Cooling Wine at the same time, with or without ice. The largest size is suitable for confectioners, and will make from 50 to 100 quarts of Dessert Ice in a few minutes.

MASTERS' PATENT SHERRY COBBLER FREEZING AND COOLING JUG,

For producing Pure Ice from Spring Water, on your own table, in five minutes, without the aid of ice, by his Freezing Mixture, which will produce ice in one minute in the hottest climate.

Every description of APPARATUS for PRODUCING ICE ARTIFICIALLY.

Also, by Royal Letters Patent,

MASTERS & CO.'S PATENT ROTARY BUFF KNIFE-CLEANING MACHINE, £2 2s. and upwards,

Which will clean and polish, equal to new, 12 knives in one minute, without noise or dust

Descriptive particulars and engravings, with upwards of 700 testimonials, forwarded on application to MASTERS & CO., 333, Oxford-street, Regent-circus, and his Depôt adjoining the Polytechnic; also, at 7, Mansion-house-place, City.

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